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## **Abstract**

In this article I examine the 'turn to' post-qualitative inquiry, new materialism and post-humanist theories to consider the challenges of, and implications for, doing research in sport, health and physical culture. The term 'post-qualitative inquiry' (PQI) indicates a decisive departure from the ethico-onto-epistemological assumptions that have informed the humanist interpretive tradition of qualitative research (St Pierre 2011). Moving beyond a theory/method divide, PQI draws its methodological inspiration from critical post-humanist debates concerned with how 'matter' is thought and constituted through entanglements of human and non-human bodies, affects, objects and practices. Such a shift reorients thinking around *relational questions* about the material-discursive forces coimplicated in what bodies can 'do' and how matter 'acts', rather than a concern with what 'is' a body or the agentic meaning of experience. I discuss how these new styles of thought reorient our onto-epistemological assumptions and theory-method approaches through engagement with PQI within (and beyond) sport, health and physical culture scholarship.

Key words: post-qualitative inquiry, post-humanism, new materialism, embodiment

## **Introduction**

In this article I engage with the critical and generative questions posed by post-qualitative inquiry (PQI) and new materialist theories to consider the challenges of, and implications for, doing research in sport, health and physical culture. Across the 'field' there has been an impressive development of diverse methods of inquiry, engagement with complex ethical issues and innovative re-presentations that offer compelling insights into human experience and social change. Yet, I am cautious about assuming that qualitative researchers have arrived at an 'identity' characterised by greater self-certainty, legitimacy and value within (post)positivist audit cultures of research performance that commodify and institutionalise knowledge (how big is your H factor? what is your grant portfolio worth?) (Somekh and Schwandt 2013). Rather being primarily concerned with our legitimacy as qualitative

researchers, I want to stay with the unsettling, disturbing and diffracting qualities that our 'difference' can produce. It is this very difference that we can mobilise in diverse ways to either refute, decentre or extend the (post)positivist research terrain because often 'knowledge' that is produced fails to capture the complex, entangled relations of our embodied lives (social disparity widens, 'obesity' has not been solved, environmental degradation spreads and political cultures lean towards extremism).

Debates oriented around the methodological-theoretical concerns of post-qualitative inquiry (St Pierre 2011), along with the broader theoretical-methodological orientations of the 'new' materialism (Coole and Frost 2010, Fox and Alldred 2016), offer a means of rethinking the thinking that underpins the 'doing' of research practice. In this article I will explore how PQI moves beyond a theory/method divide and fundamentally challenges the ontological assumptions of humanist traditions of qualitative research that have focused on understanding the meanings of individual and collective human experiences. PQI draws its methodological inspiration from critical post-humanist debates concerned with the limitations of how humanness has been thought in dualistic ways that privilege certain identities over others (eg., whiteness over blackness, masculinity over femininity, culture over nature). Pushing our thinking beyond 'human experience' are ontological questions about how 'matter' is thought and constituted through entanglements of human and non-human bodies, affects, objects and cultural practices. Such a shift reorients thinking around *relational questions* about the material-discursive forces that are coimplicated in what bodies can 'do' and how matter 'acts'. This focus differs from more conventional approaches concerned with what 'is' a body or the agentic meaning of experience that have characterized humanist interpretivist traditions (St Pierre 2014, 2015). PQI emphasizes the importance of formulating research approaches that move beyond dualistic categories of human being and knowing that have underpinned humanist thinking; objective/subjective, reason/emotion, culture/nature, mind/body, human/non-human, self/other mappings

across social differences and inequities. For me these ideas raise two related ethico-onto-epistemological questions (assumptions about being and knowing that underpin ethics and truth in research) for qualitative sport, physical culture and health research. First, how does our orientation to research render different modes of embodiment culturally intelligible in the claims that we make about truth? Second, how can we critically challenge, rather than unknowingly reiterate, normative assumptions that negate or ignore different embodied practices of living and thinking?

The fields of sport, leisure, health and exercise research are governed by a range of normative assumptions and an interplay of forces that include different academic traditions and disciplinary conventions, institutional contexts and policy narratives. Within public culture the redemptive narratives of sport work to simplify the complex experiences and profound inequities inscribed through the social order. For example, sport is good for your physical and mental health (exercise is the new medicine), sport creates social cohesion and reduces crime. One of our research challenges is to avoid the trap of (un)knowingly reiterating redemptive narratives through qualitative research by asking the kinds of onto-ethico-epistemological questions that reveal how normative truths about bodies, subjectivities and privilege are constituted and contested (Barad 2003). This twists the focus of much qualitative research away from the emphasis on a hermeneutics of lived experience that has privileged the interpretive subject and towards the material-discursive relations that make the life of the body and its movement (im)possible (Butler 2014).

In these personally, politically and professionally challenging times do our research practices provide a way of remaining critical and hopeful, open to embodied uncertainty and wonder, as well as the possibilities arising from not knowing? As Lather (2015) has suggested an orientation towards 'not knowing' can inform a methodological orientation of 'undoing' normative assumptions in order to open up ways of thinking otherwise. Living with the ambiguity, uncertainty and the partiality of knowledge can be incredibly productive for

thinking beyond the conventional approaches that have defined individual and social problems in often one-dimensional ways. So how might we respond to the unexpected moments that qualitative inquiry generates in terms of thinking through questions of 'matter' - the materiality of embodied movement? If we also understand research to be an embodied practice, what possibilities exist for researchers to be moved to think, feel and know 'matter' differently through encounters with others (humans, non-humans, objects, texts, images)? Next I turn to the question of thinking through new materialist debates in the post-disciplinary era and the (dis)connections with PQI.

### **Thinking with new materialism**

The term 'post-qualitative inquiry' (PQI) has recently been coined in a decisive move to cut through the ethico-onto-epistemological assumptions that have informed the humanist interpretive tradition of qualitative research (St Pierre 2011). Post-qualitative scholars suggest that theory is often the elephant in the methodologically oriented room (Lather and St. Pierre 2013, Kuby *et al.* 2015). Hence, PQI strongly critiques any theory-method divide that reduces qualitative methodology to a matter of technique, instrument or toolkit. More specifically, PQI is driven by theoretical debates about ontology within diverse post-structuralist and critical post-humanist approaches that are often identified collectively under the rubric of new materialism (Coole and Frost, 2010). New materialist debates are unsettling the foundational assumptions of disciplinary research and theory in the desire to revitalize academic engagement within the post-disciplinary era. For example, there is growing dissatisfaction with the limits of the contemporary sociological imagination that ignores the biosocial formation of social life (Fitzgerald *et al.* 2015, Fox and Alldred 2016, Pyyhtinen 2016). Fitzgerald *et al.* (2015) argue that new styles of thought are needed to address the complexity of social problems in terms of the bio and the social as co-implicated processes that constitute the 'life' of individuals and populations. This Foucauldian inflected

line of materialist thinking opens up ontological questions about the limitations of structure/agency formulations to consider how we research the social without presupposing the biological or nonhuman nature as some kind of presocial substratum of existence.

Other scholars in sociology, feminist and queer theory, post-colonial studies and cultural theory work with different styles of materialist thought by drawing upon diverse theoretical trajectories. Examples of different styles of new materialist thought include, but are by no means limited to; Deleuze and Guattari's (1987) theorization of relations of affects that produce assemblages and events, Barad's (2007) 'agentic realism' that emerges from quantum physics to explore the 'intra-actions' of matter, Haraway's (2013) nature-cultures and diffractive thinking, Thrift's (2008) work on non-representational theories of affect, Bradotti's (2013) feminist post-humanism and Latour's (2005) actor network theory (for a useful introduction see, Fox and Alldred, 2016). While the theoretical language can be difficult for anyone who is unfamiliar with this diverse scholarship, the varied insights importantly challenge many 'normative assumptions' through which we have come to think of, about and through embodied subjectivity and movement. For example, interpretive approaches have assumed that the source of embodied meaning lies 'within' the subject as an agentic being; these include psychological theories of self-determination through to more phenomenological accounts of sensory experience of the world. Such assumptions bracket out the discursive and material forces through which power relations work to produce certain agentic capacities and opportunities for particular kinds of embodied subjects. In contrast, Shildrick (2014, p.13) questions normative understandings of disability to reveal the power relations underpinning able/disabled constructions of human agency when she considers 'capacities of the disabled body, understood not as a less than perfect form of the normative, but as figuring difference in a nonbinary sense'. These are critical issues about the very ontologies of normality and difference that create hierarchies of value for diverse bodies.

In terms of thinking through the material practices of physical culture, I want to acknowledge a debt to feminist theories of embodiment, material-discursive formations of subjectivity and relational power (Grosz 1994, Braidotti 2013, Haraway, 2013). As Alldred and Fox (2016) also argue this work has paved the way for new materialist thinking over many decades. Critiques of the claim to 'newness' have also been raised by feminist and post-colonial, Indigenous scholars (see Ahmed, 2008). Italian philosopher Braidotti suggests that posthumanist feminism offers a way of thinking about how we might 'do criticality' in a way that affirms possibilities for change (for a recent feminist discussion on critical debates in physical cultural studies see, Adams, *et al.* 2015). Braidotti (2013) identifies two key orientations in feminist post-humanism;

1) A *critique* of the universalised assumptions about the human subject that underpins our normative thinking about social life, identity, knowledge and physical cultures that is premised on an unacknowledged white, male, heterosexual, able bodied subject who exists apart from non-human nature. This means asking questions about the power relations that sustain exclusionary ways of thinking and acting for individuals, collectivities in sport and in our research (despite our good intentions). Feminists working within post-humanism don't necessarily want to abandon humanist ideals of social justice, empowerment and freedom. However, they do want to reframe key debates and critique the assumptions that have pervaded Humanist thought about the subject who has been historically cast as the 'Man of Reason'.

2) The other dimension of this feminist orientation is the *generative capacity* to create other ways of knowing and being gendered subjects – the politics of possibility – that values social transformation in diverse forms via individuals and collectivities performing, producing and negotiating the micropolitics of everyday practices and institutions. Such

an approach moves beyond practices of critique that endlessly reassert over generalised explanations for social problems and reify processes through the use of explanatory concepts, such as neoliberalism or patriarchy.

In this orientation to knowledge feminist theory is thus not seeking to simply create knowledge 'about' women (with the complex issue of essentialism), but to produce different ways of knowing and becoming through the body, beyond dualistic categories and with reference to gendered practices of othering difference, as well as those that diffract and trouble the normative (Grosz 1994, Barad 2007). Critical posthumanist debates fundamentally question assumptions about how 'matter' is lived and constituted relationally through entanglements of human and non-human bodies, affects, objects and practices. They turn away from a focus on identifying what 'is' a body or the agentic meaning of experience, and towards a focus on what bodies can 'do' and how matter 'acts'. Such a shift reorients thinking around *relational questions* about the material-discursive forces that assemble human subjectivity through a complex range of forces that constitute human and non-human embodied life in particular ways (that matter). As Barad (2003, p. 808) explains, 'A posthumanist account calls into question the givenness of the differential categories of "human" and "nonhuman," examining the practices through which these differential boundaries are stabilized and destabilized'. In this sense theory does not mean explanatory models or reified concepts into which we 'fit' constructions of social life, rather this is a different kind of analytic that pays attention to affective relations, flows of power and material processes that constitute 'lively matter' (Coole and Frost 2010, Braidotti, 2013). Theorising is itself a knowledge or writing practice, it is generative of different ways of thinking through embodiment as material-discursive phenomena. As Barad suggests (2003, p. 802) 'A *performative* understanding of discursive practices challenges the representationalist belief in the power of words to represent preexisting things'.

## **Post-qualitative Inquiry: Theoretical orientations to methodological issues**

Although new materialist theories are not particularly new in broader cultural theory debates, they have begun permeating writing on sport and physical culture in ways that extend post-structuralist concerns with the discursive formation of meaning. Some recent examples of this growing body of scholarship include; Markula (2014), Pavlidis & Fullagar (2014), and Roy (2014) draw upon Deleuze and Guattarian and feminist theories of affect to explore how gendered, heteronormative power relations work rhizomatically through bodies in dance and sport (e.g., roller derby and surfing). Moving beyond emotion as interiorised, personal feeling we have argued that sport offers a means of exploring how, ‘The embodied intensity of emotions, such as hatred, is both felt and culturally imagined “in the very negotiation of boundaries between selves and others, and between communities” (Ahmed 2004, p. 51)’ (Fullagar and Pavlidis (Forthcoming 2017). Fox (2013) also writes through the flows of emotional intensity that assemble an affect economy through the Olympic and Paralympic games. Rich (2010) examines obesity as an assemblage of surveillant and affective body pedagogies while Manley *et al.* (2012) think through the surveillant assemblages that govern elite sport. Thorpe (2014) asks transdisciplinary questions about the biosocial relations of sport that render women athletes’ bodies (un)healthy. Fullagar (Forthcoming 2017) unpacks the mind-body relations implicit in the rise of a ‘corporeal therapeutics’ in mental health and Francombe-Webb (Forthcoming 2017) identifies the complex visceral and mediated relations of gendered movement. Pringle *et al.* (2015) make the case for taking seriously the embodied affects that produce sporting pleasures, while Andrews (2016) reviews the use of non-representational theories of affect in sport geographies.

In more Latourian vein, Millington and Wilson (2016) explore golf through eco-matters of concern to identify the politics of environmental modernism and the various

actants (from pesticides to lawn) at play. Also drawing on actor network theory Weedon (2015) enters into the thick mud of Tough Mudder to rethink agency from an individualised notion of 'human exceptionalism' to a distributed sense of embodied movement. He articulates an ontological shift towards the non-human, 'This means insisting on the radical distribution of agency as the effect of collaborations, as opposed to being set forth from human intentions: everything is active in cultural-natural-technological collectives, and anything present is therefore potentially agentic' (Weedon 2015, p.15). The growing interest in this wide ranging scholarship is also evident in a forthcoming edited collection that will explore the moving body through sporting ecologies, assemblages, and new materialisms (Newman, Thorpe and Andrews, Forthcoming).

While new materialist perspectives engage with empirical questions concerning ontology, the orientation of these questions has not necessarily been guided by the concerns that have been raised by qualitative methodologists identifying with PQI. It would be fair to say that the post-humanist inspired literature cited above involves a spectrum of methodological approaches that sit 'within and against interpretivism' (Jackson and Mazzei, 2013, p.161)(see also, Barbary and Boles 2014). Not all the methods employed in this new work involve a complete refusal of the perspective of human subjects (even if multiple, relational, entangled), nor do they necessarily refuse aggregated categories (gendered identities) or consider the tensions of 'writing' ontologically about aspects of life that exceed capture in discourse. The term PQI has not yet been widely adopted in the broader scholarship that seeks to think theory and method together to produce different ways of doing research. For example, the Deleuzian inspired research of Coleman and Ringrose (2013), Markula (2008, 2014), Ringrose and Renold (2014) and Allred and Fox (2016) has not identified with a unified methodological identity, rather these scholars articulate more specific thinking with theory practices. The PQI literature that has emerged largely out of educational scholarship that has a long history of wrestling with the tensions that arise in

post-practices (MacLure 2013, Lather and St. Pierre 2013). Within sport, this journal contributes to these on-going conversations via the work of Canadian scholar van Ingen (2016) who recently took up the mantle of PQI to publish her feminist research. This research offers a creative 're-presentation' of a gendered boxing programme and I will include her work in the following discussion of PQI orientations.

After many decades of critical 'post' engagement and defense of qualitative methodology against positivist attacks in educational policy, American education scholar St Pierre in 2011 coined the term PQI to assert the 'impossibility of an intersection between conventional humanist qualitative methodology and "the posts"' (St Pierre 2014, p.3). She has also written a compelling account of the shifts in her own qualitative research career that provides a genealogy of post ideas within the North American context (St Peirre 2014). As a critique of qualitative research that doesn't push the boundaries of knowledge or unsettle normative understandings PQI is concerned with 'transgressing what has been "normed" in qualitative research so that methodological approaches align with post-theories' (Kuby *et al.* 2015, p. 141). I briefly outline several major concerns that revolve around questioning the normative research process, representation and thinking with theory.

Lather (2015) has argued that the normalized practice of humanist qualitative post-positivist research is recognizable as a *linear process* that privileges static categories of knowledge (themes that reflect the essence of experiences) and unproblematic claims to masterfully represent the realities of humanist subjects. This process is often cited as one involving finding a research question, designing the elements of the study and deploying human centered methods to extract data from people that can then be coded into aggregated themes and written up (Alldred and Fox 2016). In contrast, Lather advocates a methodology of 'getting lost' as one means of moving beyond linearity, expert centred knowledge and closed forms of analysis. This orientation informed van Ingen's work on a Canadian boxing project for cis and trans women who have experienced violence. Her article

provides a compelling account of thinking through the arts, gendered embodiment and different starting points for research. Van Ingen (2016, p. 447) explores the creative practices through which participants articulated the complexity of trauma and transformation through boxing -

paintings are presented here as a way of 'fleshing out' different routes to knowledge and of highlighting experiences, meanings, and stories that work to open up, rather than foreclose meaning. The art project provides space for voices and experiences that cannot be easily classified and that do not make easy sense (Jackson and Mazzei 2012).

This example outlines the tension that Lather (2015) identifies between the political imperative to make visible participants' experiences and poststructuralist critiques of representation. Barad (2003, p. 802) argues that 'the representationalist belief in the power of words to mirror preexisting phenomena is the metaphysical substrate that supports social constructivist, as well as traditional realist, beliefs'. Resisting the normative involves different starting points, ways of engaging, moving through multiplicity. Van Ingen goes on to acknowledge and resist 'what Lather and Smithies (1997) call 'the fiction of restoring lost voices' despite the pressure from external funders that are eager for redemptive sport narratives' (van Ingen 2016, p. 477). This paper derives its orientation from ontological questions about the effects and affects of art that are entangled with embodied capacities produced through sport and the visceral legacies of gendered violence.

The boxing training-artistic practices produce an evocative account of the complex experiences of transformation that trouble the assumptions of sport programmes that aim to 'empower'. As Barad (2003, p.809) might say, 'The move toward performative alternatives to representationalism shifts the focus from questions of correspondence

between descriptions and reality (e.g., do they mirror nature or culture?) to matters of practices/doings/actions'. The focus on critical questions of 're-presentation' in van Ingen's (2016) article evokes for me another set of questions concerned with 'thinking through theory'. The artworks and writing evoke the flows of affect that produced, and were, produced through women's embodied 'intra-actions' with each other and their own gendered histories (e.g., the affective relations of shame, pleasure, anger). These intra-actions also evoke the material entanglements with the boxing gym; equipment, clothing, images, narratives and the gender relations through which cis and transgender subjects perform womanhood beyond the gym. For example, the assemblage of work – relationships - other physical cultures – income – transport mobility that are implicated in the micropolitics of everyday life. The agentic capacities of the boxing programme can be found in these entangled relations of bodies, materials, objects and affects, rather than within the women themselves as unified, bounded humanist subjects.

As well as creative forms of engagement that resist tropes of realist representation, the practice of 'reading' and engaging with 'data' differently has been a significant focus of post-qualitative debates. Rather than homogenise data into themes and concise narratives, Jackson and Mazzei (2013) advocate 'a reading of data that is both within and against interpretivism' (p. vii). As St Pierre (2014) says the approach is not one of developing a recipe to follow but thinking about concept as method. What makes 'thinking with theory' different from other methods of analysis is the 'relation with' theoretical ideas (questions of affect, discursive formations, binaries, power) that 'shapes how data and transcripts are produced, how one intra-acts with data, and how one writes-up research' (Kuby *et al.* 2015, p. 142). As an example, I have recently co-written an article that explicitly uses PQI (Fullagar, Pavlidis and Stalder Forthcoming 2017). As a collaborative writing method we sought to think through feminist and Deleuze and Guattari's theories of affect to explore the complexities of doctoral supervision as an entangled assemblage of supervisor and students.

We worked against the normative assumptions that position students and supervisors within hierarchies of knowledge to reveal the blind spots that connected and separated our learning and becoming. This project challenged my thinking about doing post-qualitative research in many ways and also transformed my understanding of 'doing' supervision through a methodology of 'undoing'.

We 'plugged in' theoretical insights of Deleuze and Guattari (1987) on the flows of affect (as the visceral, embodied forces of feeling that are often preconscious) to explore 'critical moments' of undoing when we felt stuck, frustrated, isolated, immobilised (Jackson and Mazzeri 2013). To explore supervision as assemblage we pursued a style of thought that was rhizomatic, enfolding rather than a root and branch foundational metaphor - a multiplicity of affects. In this sense, research is a process of setting in motion ideas and tracing the *affective intensities* arising in the particular methodological relation with empirical contexts (Ringrose and Renold 2014). Analysis involves attending to what forces of affect, entangled with recognised emotions, 'do' as they create particular kinds of intra-active relations that produce different ways of feeling – offering a critique of the rational, unified subject. These ideas are useful for thinking through physical cultures; bodies blush with shame through the affects of microaggressions and intensity of sexist, ableist, Islamophobic, homophobic or racist comments made about size, inability or skin colour. Bodies are multiplicities that glow with intense pleasure of discovering how they become through the capacities engendered by movement, and feel the vertigo of despair produced through exclusion and dehumanising isolation.

Thinking with theory together enabled us to perform different supervision practices that were more productive for our learning alliance. The limitations of language are apparent here as an alliance suggests two separate entities coming together to 'interact' with each other. Barad (2007) reformulates this relation through the notion of 'intra-action' as a process of coimplication, where subjectivities are produced through the particularities

of the relation rather standing somehow outside of it. I was drawn into thinking further about this notion of entanglement that brings minds, moving bodies, environments and the non-human into relation. How might qualitative researchers engage with the non-human world in ways that don't simply reproduce 'human exceptionalism' and anthropocentrism ?

### **Thinking through the more-than-human**

Thinking through a more-than-human orientation means starting from the ontological assumption that our embodied experiences are entangled with other humans (e.g., experts, strangers and intimates), non-humans (e.g., parks, microbes, food, animals, chemicals, rooms) and objects (e.g., antidepressants, self-tracking technologies, roller derby skates) (Pyyhtinen 2016). There is a key question here concerning what is the nature of our embodied relation with matter? How does matter make itself felt through our embodied practices? How does matter become intelligible? Barad's (2007) 'agential realism' theory has significantly contributed to an ontological understanding of the relationality of objects and humans that is premised upon coimplication, rather than an interaction of separate phenomena. Barad's Ph.D. is in theoretical particle physics and she works across physics, science and technology studies and feminist and queer theory. Refusing the idea that our social world is primarily made up of 'human interactions', Barad coins the term 'intra-action' to explore how phenomena are fundamentally entangled by relations that co-constitute the subject and the world, objects, other materialities. She asks us to think ourselves as of the world, part of the lively and ongoing production of possibilities and exclusions, as entangled. Materiality matters not as an add-on to language, not as a matter of language, but because the material can never be separate from language. Expanding the materialist orientations of Foucault (1991) and Butler (2014), Barad (2007, p.141) argues for a post-humanist performativity in which, 'All bodies, not merely "human" bodies, come to matter through the world's iterative intra-activity – its performativity'. Drawing on Donna

Haraway's work Barad (2007) uses the physics concept of diffraction to articulate the patterns of wave particles that collide and produce new forms of motion. Developing a diffractive methodology Barad reads across science and social science disciplines to bring insights into critical relation, disturbing the assumption of both as separate. This approach pays attention to 'how differences get made, what gets excluded and how these exclusions matter' (Barad 2007, p.32).

Barad (2007) also pursues Haraway's question – why should bodies end at the skin? In this way Barad's work raises questions about how the nonhuman acts through the body disturbing the normative assumptions of boundedness. We are moving, digesting ecologies with more microorganisms in our bodies than actual human cells. How do we think beyond the humanist phenomenological body that we have learned to conceptualise through dominant visual metaphors as a bounded whole and as an entity that we possess (and master via a mind/body dualism)? Barad's work helps us think about the permeability of bodies and what is not visible in our intra-actions. We can think about a less well-recognised threat to our health that is coimplicated with our movement through places for physical activity (e.g., parks, cycle paths, streets, playgrounds). Long-term exposure to air pollution is estimated to cause 40,000 premature deaths each year (Holgate *et al.* 2016) in the UK with 'an average loss of life of 11.5 years'. This is over three times the number of premature deaths associated with obesity. Environmental pollution and poor air quality (outside and inside with chemical use, heating etc) is one of the most serious contemporary public health risks. It contributes to a wide range of health problems, such as asthma and heart failure. This issue requires complex ways of thinking about the intra-actions between people, consumption and mobility practices, and the permeability of bodies that unknowingly move through diverse spaces. Current health promotion and sport policies promote physical activity in low-income areas to address inequalities of access yet these areas are often more polluted. Without thinking about the intra-actions that produce embodied movement and

health as a biocultural phenomena are health and sport policies contributing more harm than good? Conventional approaches in sociology and policy have generally conceptualized both 'bodies' and places ontologically as 'settings' or environments that are experienced by individuals and populations. They are considered neutral matter that can be acted upon, regulated and surveilled to achieve behavior change for individuals and populations (Guthman and Mansfield 2013). In contrast, new materialist thinkers offer an understanding of the assemblages of dynamic intra-actions made up by bodies-environments, biochemical flows, affective states and relational power. This way of thinking resists normative assumptions about place as a spatial container, bodies as receptors, or bodies as mutable only via intentional human action (Guthman and Mansfield 2013).

These questions recast issues of health, social and environmental justice by considering the somatization of inequality in relation to bodies positioned as in/active, unhealthy/obese (Warin 2015). As Barad (2003, p. 809) argues 'any robust theory of the materialization of bodies would necessarily take account of how the body's materiality—for example, its anatomy and physiology—and other material forces actively matter to the processes of materialization'. Such concerns about ontological body politics rub up against the effects of 'austerity' in the UK where the erosion of public funding affects the material provision of parks, leisure centres, community sport, childcare, libraries and health programmes. These sociopolitical questions are also bound up with the need to rethink the legacies of the mind-body, culture-nature, self-other oppositions that continue to haunt knowledge practices of social science disciplines. Articulating new materialist desires for a more-than-human sociology of sport, health and physical culture poses new challenges for qualitative research that move well beyond old oppositional relations with positivism, science and quantification. They also open up possibilities and tensions around intra or transdisciplinary collaborations that bring into play ways of researching the entanglements of nature-cultures, mind-bodies, individuals-environments (Fitzgerald *et al.* 2015, Warin

2015).

### **Concluding remarks**

This article has traversed the broad terrain of new materialism and PQI to suggest new possibilities for researching sport, health and physical cultures. As a field we are researching in interesting times with institutional pressures to comply with normalised practices of representation, truth telling, accounting for impact and increasing citations. These forces often work against new directions in thinking across the social sciences and humanities that raise a host of ethico-onto-epistemological questions about knowledge practices and claims to know. PQI has emerged out of desires to 'do' research that is critical and generative of different ways of knowing 'within and against interpretivist' traditions (Jackson and Mazzei 2013, p.161). In a desire to highlight the implications for developing different research approaches I offer the following summary points and examples of possible future directions.

- An ontological orientation to physical culture and embodied movement involves different ways of 'thinking with theory' to examine the material-discursive relations that produce, affect and diffract normative assumptions. The emerging public interest in gender diversity provides an opportunity to research how non-binary bodies challenge the dualistic gendered ontologies (masculine/feminine) that have structured the performative practices of sport in highly exclusive ways. What kind of gendered sport assemblage is produced through human and non-human intra-actions involving bodily affects, images, objects, policy texts, organizational guidelines, and research evidence?
- PQI invites different re-presentational practices through which research can be enacted to affect and generate insights that are not simply about capturing authentic human experience. Rather, research can be written to disturb normative assumptions, to reveal how inequalities of race, socioeconomic status, gender or

disability are somatised in ways that trouble 'naturalness' and engage through different flows of affect.

- Moving beyond 'human exceptionalism' involves thinking differently about bodies as permeable and coimplicated in nature-cultures. Physical and mental (ill) health, active living and environmental matters of concern are thoroughly entangled in our everyday lives. There is a need for post-disciplinary and multi-method research approaches that can explore the complex assemblages that are being produced around (in)active lives – obesity policies, urbanization and sport legacies, the repositioning of exercise as medicine, along with the complexities of climate change.

Within the identification of PQI as a new approach there is the danger that defining parameters around diverse range of theoretical-methodologies could risk normalizing counter (post) identities. As Foucault (1991, p.383) argued 'everything is dangerous', there is no outside of power relations in research. While PQI has contributed to opening up research practices to explore our entangled, more-than-human experiences, there are also critiques that serve as an important reminder of the partiality of all research and knowledge claims. Through their post-colonialist engagement with PQI, Gerard *et al.* (2016) offer an important critique that also resonates with feminist posthumanist concerns (Braidotti 2013) about thinking beyond 'neutral' embodiment to examine how difference comes to matter,

Without explicit attention to power and history, the (non)representational logics of post-qualitative inquiry risk operating less as "new" mechanisms for generative and subversive post-humanist research and more as processes of closure and erasure: closed-off from the worlds and people being researched, whose histories and voices are obfuscated, displaced, and, at worst, erased.

For me there is also a question here that is not just about 'where' to make the 'cut' in terms of delineating PQ research from more conventional humanist practices, but also one of 'how' to open up a discursive space to, converse, tease out implications, and invite people to engage at different points from different perspectives. I think about this in terms of affect and how we might mobilizing our shared passions for intellectual inquiry in the face of institutional pressures, as well as refusing the kinds of shaming practices that turn academics away from theoretical debates (have you not read every word of Karen Barad's 525 page book *Meeting the Universe Half Way: Quantum physics and the entanglement of matter and meaning?*). Doing theoretically oriented research that pushes the boundaries and creates uncertainty requires more than an individualised intellectual responsibility. One of the challenges ahead is to create generative and generous intellectual cultures that enable us to think rhizomatically as we negotiate the changing power relations of austerity, audit culture, marketisation of education and the rise of conservative global politics.

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