Editorial Introduction

Posthuman perspectives: relevance for a global public health

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In this special issue of *Critical Public Health* the papers collectively explore how certain theoretical perspectives in the social sciences, often termed 'posthumanism', might productively be applied to public health research. In this introduction we want to argue that this is much more than an academic exercise that simply follows intellectual fashion, to show its value for those engaged in a wide range of research and applied work. More than this, we also want to argue how it has the potential to reinvigorate a key argument that some readers may fear are disappearing from view – that talking about health is talking about politics.

From the outset, however, we need to acknowledge that the perspectives we are referring to are resolutely heterogeneous. Whilst there are some who have attempted to define and delimit what posthumanism might mean (see Braidotti, 2015; Wolfe, 2010), many of the theorists our contributors draw on might either reject the label, or feel they have little in common with other writers they are associated with. Nevertheless, it is at least possible to make clear what posthumanism does not refer to, and state a few common features.

First, it is important to emphasise that in all of the papers in this special issue there is no attempt to link posthumanism to transhumanism. This latter term refers to ways in which the current capacities of human beings might be enhanced by technology in order to go beyond what we take to be our normal biological potential (Bostrom, 2005). Transhumanism therefore engages with ideas of non-organic, biological and pharmaceutical enhancement. But while some of this literature cautions on the ethical consequences of making humans more than they currently are (McNamee and Edwards, 2006), much of this work has a celebratory, science-fiction orientation, not to say messianic sentiment, given that forms of transhumanism have morphed into a number of new religious movements (e.g. see Tirosh-Samuelson, 2012). Although there is apparent cross over between this literature and certain terms adopted by posthuman theorists who talk of the cyborg (Haraway, 1991) or hybrid (Latour, 2005) they do so mainly to invoke processes of melding, mixing and the unsettling existing categories, rather than as literal accounts of human augmentation.

We would argue that drawing on posthuman perspectives offers much more than merely a concern for new possibilities for human existence. Rather, it reflects an interest across many academic disciplines – including geography, sociology, anthropology, science and technology studies, and feminism – to reframe current social enquiry by looking more carefully at the role non-human elements, such as objects, other organisms and the environment play. At one level this is far from new. For example, all readers will of course know the iconic story of John Snow and the Broad Street pump handle. Notwithstanding evidence that suggests the

removal of the pump handle was perhaps not as significant as originally claimed (Krieger, 1992), it nevertheless continues to be represented as having been central to stemming the outbreak of cholera in Soho, London in the mid 19ᵗʰ century. But a more contemporary, posthuman account might well say the bar of iron constituted a significant *actor*. What is the point of telling the story this way, and risking the wrath of critics who dismiss the use of words such as 'actor' and 'agency' to non-human elements? (See Elder-Vass, 2015, for just such a retaliation.) At one level, the point is simple; to present accounts of humans and nonhumans in common ways, so that we don't inadvertently assume from the outset that one is more important, or has more influence, than any other. In other words, if we are going to present the impoverished Soho dwellers as actors, then why not also the handle which was just as important – since only in combination could the contaminated water be obtained? The point this illustrates is a posthumanism conviction not to automatically accord humans with an exceptional status, and instead find ways to present non-human elements with equivalence. This is what some people mean when they talk about adopting a 'flat ontology' (Law, 2004). The result is that we should not assume from the outset that humans will always be central focus of our attention, but they instead constitute only one category amongst a range of different kinds of actors.

Now, it is clear that by introducing the theme of this special issue in this way it may well appear to be an unlikely topic for the CPH readership, given we are all centrally committed to research and debate that might influence the health and lives of people and tend to include other things only so far as they might causally impact on humans. So first, let us offer two levels of response that, in combination, suggest how broadening a focus beyond humans to take nonhumans seriously might have genuine value.

The value of reframing
Our first response to the question of what posthumanism might offer public health concerns its critical potential. All the papers in this issue demonstrate, in different ways, how one can draw judiciously from this body of theoretical work to re-imagine and re-problematise public health topics by both foregrounding things not normally attended to and by questioning those that might be taken for granted. This directly engages with one aspect of any critical enquiry – the imperative to find ways to conceive of issues in radically new ways, so that different aspects might fall under scrutiny.

To illustrate this, let us start with a brief anecdote. At a conference we both went to recently a number of senior academics, reacting against some of the presentations inspired by these new theoretical debates, in unison retorted, 'It's ludicrous. Forests can't think!' They were referring to an ethnography that has become synonymous with posthuman trends, in which the anthropologist, Kohn, describes how the Runa, an indigenous peoples of Amazonia, understand all living things to be part of a single biological complex that is able to perceive, process and respond (Kohn, 2013). But Kohn goes further than anthropologists might usually do. Rather than merely present this as a cultural representation that can be explained away as a 'local belief', he explores ways in which Runa ideas about thinking might legitimately be attributed to ecological systems. The error of those

senior academics, then, was their failure to recognise that considering the possibility a nonhuman entity can think is an important, if playful, provocation to ask what thinking 'is', and to what extent usual definitions implicitly reproduce cultural, anthropocentric, assumptions. Attributing something such as thought to the nonhuman does not merely reveal how an apparently neutral concept articulates particular values, but in the process of seeing how it might be attributed to a nonhuman entity – in this case a rainforest – that it can radically unsettle and reinvigorate how we approach the topic.

Of course, Kohn is in no way the first to do this when it comes to the question of thought. One could justifiably claim that Turing explored the same thing in his well-known experiment to test machine-based artificial intelligence (1950). As Turing himself noted, the test is not designed to assess whether machines can think like humans, but whether humans might be led to reason that machines think like them. What is productive in both these instances - one concerning the natural environment and the other technology - is the inherent looping between applying terms and ideas to new entities and contexts, and then recognising the extent to which they might have to be reformulated or resisted. Although this continual fluidity may well be frustrating, especially for positivists, it can nevertheless have enormous scholarly value because it forces us to continually question not 'how things are,' but 'what version of how things are should we adopt, and why?' Here, then, in the productive potential of reframing already lies some of the political potential of a posthuman approach.

Health as relational
So far we have implicitly explored the question of the utility of posthuman perspectives for public health in terms of general methodology – the nature of data that might be collected, and how best to deploy analytical categories in order to incorporate that data into our accounts. A stronger response does not reject these points, but argues matters relating to human health and illness can never be simply divided from their entanglements with nonhuman things, and that to demarcate them off dramatically limits where and how we might intervene.

It is a truism to say that the intellectual and moral commitments underscoring public health are driven by the fundamental aim of studying and improving human health. However, in different contexts the idea of 'health' is regularly applied to other things as well; we talk about animal health, plant health, the health of the environment, and even now the health of the internet. What is of note is that in all these cases the health in question is usually defined and assessed according to entity-specific criteria. But the potential of a posthuman approach, which emphases putting nonhuman elements as level actors alongside humans, is that the category of health might itself might have to be broadened and re-conceived as generalised and shared. Rather than a property of a body or entity, the meaning shifts to being a quality of relationships between humans, other living things, the environment and even material objects.

This, too, if far from a new point to make; public health has long emphasised a more relational approach to health research. But traditionally, many of the so-called 'biopsychosocial environmental' models, especially those derived from

epidemiology, nevertheless place the human at the centre of various domains of influence (e.g. Engel, 1977). In contrast, a posthuman perspective attempts to dissolve the human centrality by recognising relationships are dispersed and distributed, leading to a conceptualisation of health as a diffuse quality across diverse entities that include the human, but cannot be attributed solely to the human. Accepting this suggests not only that 'human health' is always co-produced though the nature of interactions and relations with non-humans, but that delineating human from non-human health might foreclose theoretical insight and practical potential.

Beyond the call to adopt a much broader, flatter, perspective, posthuman approaches also tend to resist describing the relationships between things as a system or bounded field. The argument is that such models and representations are only ever artefacts of the researcher who seeks tidy explanations and accounts. In so doing, inherent mess and constant transformation is substituted for order and enclosure. The alternative is to emphasise the ephemeral and context-specific nature of various assemblages of things (see for e.g., Jensen & Winthereik, 2013). What might be said to be the case in one context is unlikely to be the so in another, as each historical and geographic circumstance shapes what things are brought together and how they relate. However, this is not intended to be an argument for extreme relativism; rather, the emphasis is put on us – as researchers, readers and practitioners – to think more carefully about what aspects of any findings or insights might be relevant elsewhere, and what are rooted to the specific. In this way, not only does the focus of health research shift from the human to being a more distributed quality across heterogeneous relationships, but the analytical approach must resist trying to encompass everything into a single neat, causally ordered account.

The human focus of public health
As we have discussed, despite different disciplinary approaches and foci, public health champions a concern with human health at a collective level. But in addition to potentially reconfiguring what the boundaries of health might legitimately constitute, the very category of what it is to be human is also worth interrogating. Clearly, the question of what it is to be human has been central to Western thought for millennia. Arguably, our contemporary ideas are most influenced by writing from the Enlightenment on human nature, human rights, and human reason (Redfield, 2013; Morris, 1991), which themselves drew on texts from the Renaissance and Ancient Greeks. Being an era of optimism, triumph, new wealth and conquest (for some) shaped the proliferation of treaties on essential and universal human qualities, such as autonomy, stability, freedom, rationality, free-will, integrity, and so on. Accordingly, these characteristics provided the reasoning behind further key distinctions, such as mind/body, culture/nature, animal/human, living/dead. We would argue that these qualities and distinctions continue to be articulated in much of the contemporary work of public health; from its laudable concern with health inequalities, differential access to healthcare, and the political economy of health generally, the commitment to fairness and justice are based on deep-rooted ideas about human potential and dignity. They are also very present in much of the rise of global health, as a revision of earlier development and aid discourses. Many advocates argue that at its core

global health should concern the worldwide delivery approaches to human distress and suffering and through a language of universal human rights and ethics (Koplan, 2009). But these refined and abstract ideas associated with the human are never neutral. The same historical drives that led to essential claims emphasising the discrete, exceptional status of the human (Carrithers, Collins and Lukes, 1985) also ensured that the default human was white, male, adult and privileged (Oudshoorn, 2003). These normative qualities were consequently borne from privilege and power. The central point is that even an entity that may appear innocuous and common sense – that of the human - is not merely a cultural, but also a political category.

Despite the dominance of this representation, both historical events and theoretical writings during in the late 19th century increasingly unsettled confidence in what it is to be human. For example, the so called three-member 'party of suspicion' coined by Ricoeur (see Scott-Baumann, 2009), referring to Marx, Nietzsche and Freud, in combination emphasised how humans were not as noble, rational, aware or controlled as we might have wanted to believe. And later, during the 20th century, further de-stabilisation from such things as feminism, gender politics, critical race theory, identity studies and queer theory emphasised the inherent patriarchal nature of 'the human'. In response, they suggested subverting ideas of integrity, continuity and rationality with a new language of fragmentation, multiplicity, instability, play, and hybridity. More recently, a different body of knowledge has contributed to this unsettling; that of biology itself. Scholars have drawn on this to think about the permeability of skin (Diamond, 2013), the vast numbers of bacterial cells in the human gut (Landecker, 2016), and the never-ending difficulty in deciding when human life begins and ends (Helmreich, 2015) in order to highlight how any representation of what it is to be human inescapably enlists non-scientific values and criteria as well as scientific categories and definitions.

Crucially, one of the qualities of a posthuman approach in response to all these challenges is not to seek to resolve such ambiguity, or adopt a working definition for pragmatic purposes, but instead to accept and exploit ambivalence in order to highlight those values. One can see the legacy of these earlier debates in a variety of posthumanist subject areas: the environment, ecosystems, and debates about nature; discussions about technology, information and data; human-animal relations, and the one-health agenda; material culture and new materialism; bacteria, the microbiome and anti-microbial resistance. Within all of these, a key notion of the 'human' is replaced with approaches that recognise the contingent and co-constituted nature of humans as they exist through multiple relationships with other things. Such posthuman perspectives are not driven by a desire for academic novelty, but from the fact that the old category increasingly does not work, or make sense, when one attend to the multiple relationships between what are traditionally thought of as human and nonhuman materialities and concerns.

At this stage of discussion we arrive at new questions. What do we retain that is inherently 'public health' if we are open to revise both what 'public' and 'health' can refer to? And how might posthumanism be drawn on to do politics? Politics has never been so in the forefront of our minds. And yet, in this so-called post-fact,

post-party world, it is not always straightforward to work out how one should articulate a political position.

Decades ago, the stalwart critical thinker Habermas had a very public quarrel with the social theorist Lyotard on the complacent conservatism of postmodernism (Habermas, 1982). Habermas not only pointed to the apparent extreme relativism of postmodern thought that potentially undermined any means to take a stand, but charged many theorists with indulgent self-referential playfulness for its own sake. One way of understanding this dispute is not in terms of political conviction, but rather in terms of what the project of academic research might actually be. For Habermas and many who follow a traditional Marxist line of thinking, the central purpose is to catalyse emancipation through forms of 'unmasking' (Rorty, 1984). However, what authors such as Lyotard, Deleuze, Foucault and Baudrillard were moving to was not a total rejection of Marxism, but a worry that any project of unmasking implied one can be certain about how things really are beneath. As an alternative, they therefore shifted from the project of unmasking to a focus on the work of signs, representations, discourses and metanarratives. Rather than considering these to be modes of concealment, they were conceived to be ways in which power is articulated through constructions of reality.

Posthumansim could be said to have adopted much from this strategy. Given relationships between humans and nonhumans are infinite, and that the category of the human is itself a result of these relationships, rather than essential biological or moral characteristics, it only ever offers a partial representation to invite re-evaluation and appraisal, rather than definitive claims of truth. So politics no longer is about identifying certainties, or defending absolutes, but rather about opening up new spaces and relationships for engagement. This may well seem like a much weaker and timid politics to that of Marxist totality (Jay, 1984). But one might say as a response, it nevertheless provides a subtle kind of politics, that is perhaps more apt and productive in our current times.

The collection
In this introduction we have argued that adopting a posthumanist perspective has the capacity to reconfigure existing concerns, and open up radically new lines of enquiry. Posthumanism is thus an intellectual exercise that should be taken seriously because it has the potential not only to generate productive and practical alternative accounts, but because it may well identify new spaces and opportunities to intervene. Thus, posthuman perspectives are not about leaving what is human behind, but in fact the opposite – exploring what being human means in relation to what might be deemed as not human.

This special issue therefore explores new configurations that attend to the mutual relationships between people, other living things, objects, and environments in order to illustrate how, by attending to these, traditional public health topics might be recast. Ethnographic approaches appear particularly useful for this endeavour, given their commitment not to pursue an a priori hypothesis and their requirement for reflexive engagement. As a discipline at home with such methods, six of the contributors are unsurprisingly therefore anthropologists who have conducted in-depth fieldwork that takes the non-human as a key part of their

ethnographic focus. Their papers reflect this methodological challenge to more open-ended, if not experimental, in order to incorporate those things not normally considered central. And more generally across the papers in the issue, diverse sources of data – such as body mapping, photography and film, as well as scatter plot graphs, co-citation analysis and a futuristic thought experiment – further demonstrate the quest to escape standard approaches to research and explore a topic.

We start the collection with an engagement with the past, juxtaposing established and familiar sociological perspectives with posthuman theorists. This first paper provides a theoretical review that contextualizes the potential of posthumanism to provide new tools for public health enquiry. Making links between contrasting approaches, Will (2017) holds a 'conversation' between Foucault and posthuman scholars, suggesting that the latter provide space to acknowledge multiplicity and attend to public health practices of care. Will proposes that such reframing draws attention to inequalities and to the entangled relationships between humans and nonhumans. This overview is further developed in Friese and Nuyts' (2017) analysis of the growth of public health research involving nonhumans. Paying particular attention to writing on animals the authors identify a place to extend debate further, and identify the one health movement as a partial precursor to posthuman approaches; partial because, although it sees population health as entanglement of human and animal health, it does not go far enough. But by rigorously 'following the non-humans' they suggest public health could both benefit from, and contribute to, an emerging field. These first two papers therefore contextualize and set posthuman debates within existing theory and developing areas of interest in public health, identifying key spaces in which posthumanism has the potential to contribute. How such approaches are drawn on in the gathering, analysis and framing of research undertaken within public health are then taken up in the remaining papers in the collection.

In order to attend to the non-human in their work, the majority of the remaining papers capture many of those aspects of research that might normally be considered 'background'. In the first of these, Rock takes up the specific theme of human-animal relations brought to the fore by Friese and Nuyts through a study of dog walking in Canada. Rock (2017) draws on contemporary anthropological work that strives to examine the intimate and often mutually beneficial relationship between people and animals. The author uses this to then ask what 'the public' in public health might look like if we incorporate non-humans, and to what extent might our understandings of public health change? Implicit in her argument is a political question about voice and representation; who is able to speak, and who is able to speak for whom? While Rock questions the notion of the 'public', Garnett (2017) goes on to question our understanding of 'health'. Based on her participatory fieldwork with epidemiologists studying air pollution, Garnett's work draws out changing constructions of health from within science as epidemiologists try to pin down a notion of 'health' which makes sense of their heterogeneous, and sometimes apparently contradictory, data. Through a variety of creative techniques, in which researchers try to establish relations between air pollution and epidemiological data, 'health' becomes configured beyond the human as a distributed and relational phenomenon that takes into account ideas

of space, volume and the changing of seasons. In both Garnett's and Rock's work a central concern is how aspects of the environment not only impact on human health and wellbeing but can be seen to constitute it.

Taking a different but related move, the next three papers explicitly examine how material technologies extend into human bodies themselves, reframing how bodies are constructed, how they can be seen as joined to each other and wider socio-cultural dynamics, and how bodily substances are transformed through materials and practices. All three adopt a dynamic description the body and to human-nonhuman relations, accentuating movement, flow, and transformation in the intermingling of the human and nonhuman. In the first of these, Dennis (2017) takes a posthuman approach to drug-taking in order to critically explore current techniques of harm reduction. She argues that most of these implicitly construct a rationalist drug user as the focus of medical intervention, but ignore the relationality between bodies, words, substances and things that form collective participation in what she terms 'the injecting event'. Dennis uses body maps not to record a final representation of how drug users view themselves, but rather as a means for them to tell an unfolding story to the researcher (and, in fact, themselves). Drawing on these representations, the author describes the extended ways in which her interlocutors think about their bodies; from the mingling of substance, needle and skin outwards to spaces and places. She argues that a focus on the assemblage of elements which form the event, rather than distinguishing the body from the drug, has the potential to reframe interventions and understandings of drug use. The constraining nature of wider moral and social framings are also present in Mills' paper (2017). In her research, however, rather than the formation of assemblages associated with an event, the body itself is the meeting point for nonhuman actants in the form of HIV and antiretroviral therapies (ARVs). Drawing on the concept of posthumanist performativity, HIV and ARVs are presented as travelling complex pathways in, and within, women's bodies as women navigate the challenging healthcare resources of South Africa. But throughout Mills' paper, biomedical technologies are presented as more than a material body-nonhuman assemblage, and instead must be situated in a broader social and politics landscape.

In contrast, Lynch and Cohn (2017) take as their starting point a topic frequently reduced to the broader politics of life – blood donation. They argue that the exclusion of the routine, material aspects of blood donation in much research masks a hidden multiplicity of concepts. Through ethnographic analysis that focuses on the meeting of nonhumans and parts of the body, they suggest blood is something that is 'made' only when it leaves the body. Donated blood, they argue, is not simply extracted but constructed through the process of donation, with different material practices making various 'kinds' of blood. Lynch and Cohn argue against altruistic framings of donation to suggest that it is the increasing depersonalization and reconstitutions of these different bloods that give the resulting substances their biomedical value. Like Mills and Dennis, such work not only foregrounds the encounters and relations between the human and the nonhuman, but speaks to the wider values, political concerns and conceptual framings of public health approaches.

Using medical technology itself to draw out people's wider values, concerns and framings, the final research paper in this collection comprises a thought experiment to provoke discussion and reflection. Lehoux and colleagues (Lahoux, Williams-Jones, Grimard & Proulx, 2017) introduce a group of participants to a hypothetical technology aimed at reducing school drop-out rates; a 'smart sweater' able to provide bio-psycho-feedback to the wearer about their mental state and cognitive functioning. Drawing on the increasing popularity of self-monitoring technologies and performance enhancement substances, this case study was used to provoke moral debate about the legitimacy of such an intervention and the tension between autonomy and social coercion. While many of the other papers indirectly point to ethical standpoints and movements enabled through posthumanism, this paper illustrates how posthuman approaches may draw out the moral positioning of interlocutors themselves.

Finally, an engaging commentary by Svendsen (2017) provides a personal reflection on her ethnographic work linking neonatal care with experiments conducted on pigs. Her work not only concerns how these two field sites are connected – the research done on the animals translating to interventions conducted on frail newborns – but the way they become mutually entangled. People, concepts and even substances regularly cross from one site to another such that pigs move from being an outlandish subject on the edge of public health to one of central importance. Pigs, neonates, care and experimentation are drawn together to once again destabilize notions of a public health as being solely concerned with human populations. In her commentary, and throughout the other contributions to this special issue, the concept of 'human being' is substituted for accounts of 'being human'. It is perhaps this that ultimately speaks to, and might reinforce, a critical public health; one that recognizes health as an emergent quality of relations, but that those relations are every changing, diverse, and often surprising.

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