Learning how kinds matter: A posthuman rethinking Ian Hacking's concepts of kinds, dynamic nominalism and the looping effect

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Abstract

What does it mean to learn in a network? What does it mean to be a particular kind of learner? To develop and work towards a particular kind of being? Does every instantiation of a network lead to a different form of being? If networks are, as Jones (2016: 486) says "interactive processes that co-constructively shape persons", then how contingent are these? How much does the social and material elements of the network contribute to the learner's understanding of their own personhood?

This paper is an exploration of Ian Hacking's work on 'making up people' (e.g. Hacking 1986, 1991, 1995, 1999, 2004, 2006a, 2006b). Hacking posits that the possibilities for people are bounded, determined by what is imaginable and articulable, what is named and described. This naming of people, or classification, is part of an iterative, dynamic process in which the names and the named emerge simultaneously and in interaction with each other, changing the "space of possibilities for personhood". In this paper, I link that concept to notions of 'becoming' in networked learning and suggest Hacking provides a useful frame to think about how learners come to know about and enact particular ways of being.

I start by briefly summarising Hacking's key concepts of kinds, dynamic nominalism and the looping effect, and outline Hacking's framework. I argue that Hacking is offering a useful onto-epistemology for thinking about 'becoming' as part of a sociocultural network of humans, institutions and social processes. I then briefly describe posthumanism and explore how a posthuman and sociomaterial approach can help round out the important missing element in Hacking's theory – the materials and technologies that are crucial in understanding any learning assemblage. In bringing together these approaches, seemingly inoperable binaries collapse and 'becoming' becomes a matter of constant process and persistent re-workings. This offers productive ways to think about learning as an emergent entanglement of social, the material and the technological processes that are constantly re-working and re-creating what it means to be 'made up'.

Keywords

Ian Hacking, kinds, posthuman, sociomaterial, learning, becoming

Introduction

This paper is an exploration of networks and learning, both social and material, in producing particular ways of being for learners. It is grounded in key concepts developed by Ian Hacking (e.g. Hacking 1986, 1991, 1995, 1999, 2004, 2006a, 2006b) - kinds, dynamic nominalism and the looping effect. Through these concepts, Hacking offers a useful onto-epistemology for exploring notions of 'becoming' and how learners come to know about and take on particular ways of being as part of a sociocultural network of humans, institutions and social processes. Although Hacking's ideas are embedded in his particular interest in transient mental illness, the concepts can be usefully applied to any ideas around becoming and personhood. As Hacking asks:

> How is the space of possible and actual action determined not just by physical and social barriers and opportunities, but also by the ways in which we conceptualize and realize who we are and what we may be, in this here and now? (Hacking, 2004: p. 285)

There is a problematic missing element in Hacking's theory – the matter elided by a focus on the social. However, I will argue that his approach is not in opposition to posthuman theories that do foreground the non-human. By drawing particularly on critical posthumanism and sociomateriality (e.g. Braidotti, 2013; Fenwick, 2010) to highlight the resonances and alignments between Hacking's ideas and posthumanism thought, I hope to offer productive ways to think about learning and becoming in assemblages that account for the social, the material and technological processes.

This approach does not position learning as developing an identity to be performed, but rather as an ontological shift that is a constantly 'moving target', one where a 'looping' effect occurs as people engage with the process of description as a kind and respond to being described. Kinds, while wriggly, slippery concepts, unwilling to be pinned down and fixed in place by the gaze of scientific inquiry, open up new ways of understanding what is being learned, how, and through what kinds of networks. These assemblages are mutually constitutive, ever changing and shifting relational processes that offer a "persistent reworking of the idea of human being" (Knox, 2016: p. 35).

A brief introduction to Ian Hacking

'Making up people' and dynamic nominalism

Hacking believes that the possibilities for people are bounded, determined by what is imaginable and articulable, what is named and described. This naming of people, or classification, is part of an iterative, dynamic process in which the names and the named emerge simultaneously and in interaction with each other. He calls this process dynamic nominalism and argues that this "changes the space of possibilities for personhood", effectively 'making up people' (1986: p. 165). Hacking relates this 'making up' of people specifically to social change and social control where 'kinds' of people are "formulated in the hope of immediate or future interventions" (1995: p. 351). That is, where 'general truths' can be formed about people that are precise enough to predict behaviour and enable effective intervention (Hacking, 1995: p. 352).

Hacking argues that "if new modes of description come into being, new possibilities for action come into being in consequence" (1986: p. 166). That is, as a kind of person is named and developed, the field of description changes, opening up and also limiting possibilities for the actions and intentions of those determined by that kind (1995: p. 368). [1] Possibility is "intimately connected to our descriptions", embedded in our practice and our lives (1986: p. 166).

Interestingly, Hacking says dynamic nominalism could equally be termed 'dialectical realism' because:

> "… for the classes of individuals that come into being are real enough, in any plausible sense of the word. They come into being by a dialectic between classification and who is classified. Naming has real effects on people, and changes in people have real effects on subsequent classifications." (Hacking, 2004: p. 280)

Kinds (of people)

Hacking argues that kinds are something peculiar to people and of interest to what he termed the 'human sciences'. A kind must be relevant in sorting people's actions and behaviours, bringing characterisation and classification to something we want to have knowledge about and where we have an inclination to project the kind of behaviour onto the person.

While kinds do not encompass all that we know of people as individuals, they do enable quantification and "the abstraction of the sciences or impersonal management" (Hacking, 1995: p. 354). This can have an effect at a personal, individual level - even when human kinds are presented as scientific and value-free they are laden with judgement.

As an example for this paper, I suggest the kind "networked learner" and draw on a typical example from my own experiences teaching on the MSc in Digital Education (MScDE), at the University of Edinburgh. This

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[1] There are degrees of possibility that limit a person's ability to do or make something and not all things are possible. If a thing is unarticulable, unimaginable, then it is not within the realm of what is possible.

student, then, is a part-time, postgraduate learner, balancing full-time work commitments in Higher Education, alongside part-time engagement with online, distance study as part of an international cohort interested in digital education. To be this kind of networked learner means engaging with globally distributed peers and tutors, institutional technologies and resources (online library, virtual learning environment) and public technologies that blur and permeate the boundaries between work, study and personal life (Twitter, Facebook, Skype and so on).

The looping effect and moving targets

For Hacking, what makes human (or interactive) kinds different to natural (or indifferent) kinds is the way such kinds respond to being made up. That is, to how kinds exist under description and how they respond to being classified. Human kinds are not only value laden, but also aware of their classification. Thus, argues Hacking (1995), while mud may not care if it is classified as 'muck' or 'mud', a person may care deeply about how they are classified (e.g. as 'depressed'). The classification changes the description under which a person exists, enabling a re-description of present and even past experiences.

This awareness and response to classification has implications for the classification itself. Firstly, the changes of individuals within the kind can affect the kind itself. Secondly, since the kind changes, new knowledge about the kind comes into existence which then informs people of that kind. By studying kinds, we interact with and change those kinds – "investigations interact with the targets themselves, and change them" (Hacking, 2006a: p. 3).

Thus, for Hacking there are two targets of study – those fixed targets, generally natural (or indifferent) kinds, which do not alter under the researcher's gaze; and those moving targets, dynamic and responsive to categorization, which, once changed, "are not quite the same kind of people as before" (Hacking, 2006b: p. 1).

To continue my example of a networked learner – an MScDE student is still developing their sense of what digital education means and what it means to be a digital educator in a network of constantly shifting interests and priorities. As they develop their own understandings, exploring how various technologies and pedagogies can be brought together to help them achieve their own educative aims, those technologies and pedagogies are also still developing, meaning that the kind of 'digital educator' is always on the move, both for the field and for our networked learner learning to take on that kind.

Indeed, the concept of 'networked learning' itself is a moving target – shifting significantly over the decades from Illich's (1971) 'opportunity web' of mutual access via telephone and postal services, to the likes of Beatty et al. (2002) and Goodyear et al.'s (2004) definitions that draw specifically on ICT as mediating between various people and resources.

A social framework

Hacking (2006a) has proposed a framework of five key elements that relate to the process of making up people – classifications, people, institutions, knowledge and experts. In relation to networked learning, these terms might be defined as: classifications are the kinds that have become objects of study; the people are those becoming the kind; the institutions are schools, universities, professional bodies or the like; the knowledge is both popular knowledge shared by the interested population and expert knowledge produced by professionals in the field; and the experts are those who judge the validity of knowledge and use it in their professional practice.

Hacking (2006a) argues that there are rival frameworks, reactions and counter-reactions between frameworks. For him, any divergence or contestation in any element of this framework constitutes the creation of another framework. The difficulty in this conception is clear - no two institutions, experts or even formal knowledge structures are completely aligned. There could be innumerate frameworks all struggling to dominate the others. Instead, it may be more useful to think of each element of the framework as a site of ongoing contestation in which overlapping, opposing or similar forms of that element are participating in an ongoing process of negotiation. Indeed, in this way, reality is multiple (Mol, 2002), neither as Postma (2012: p.142) so succinctly says, "something 'out there' (objectivistic), or something 'in here' (subjectivist, relativistic), but the outcome of network-building processes". Each site of contestation enacts different realities, producing different relations between those elements of the network (teachers, learners, institutions and so on). Education does not, then, "simply represent a (static) reality" (Postma, 2012: p. 151).

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205

Our typical MScDE student embodies not only the competing frameworks of what constitutes a 'networked learner', but also has to navigate the 'becoming' of two different kinds – a networked learner and a networked teacher. As part of a programme focused on innovative and completely digital teaching strategies, their experience of networked learning may be very different to what they might experience at work as networked teachers and, in turn, how they influence the frameworks of their own networked learners. As they endeavour to develop their networked teaching practice in contexts that might include blended or face to face approaches, they focus on both different pedagogical aims and strategies and different fields of study. For them, then, the kind of 'networked learner' is differently positioned – in their studies as being connected to an array of technologies (from VLEs, to Skype and Twitter, to Minecraft and World of Warcraft) with a global cohort, and in their teaching as a kind produced through, say, labs, lecture theatres, clickers, and VLEs with a local cohort.

Hacking and posthuman approaches to learning

There are useful but often unarticulated relationships between Hacking's ideas and posthuman approaches that, if made more explicit, could help resolve some of the difficulties in Hacking's theory in relation to the place of the material in his competing frameworks. This is of particular relevance when considering the kind of networked learner and the ways in which networked learning frameworks create bounded possibilities for that learner.

For this, we can draw on posthuman approaches, in particular those of critical posthumanism (e.g. Braidotti, 2013; Knox, 2016) and the sociomaterial (e.g. Fenwick, Edwards and Sawchuk, 2015). While posthuman approaches are messy and varied, there is a shared questioning of the humanist assumptions of a 'basic human essence' (Badmington, 2000: p. 4) or a 'unitary subject' (Braidotti, 2013: p. 26) that is autonomous, rational and transcendental (Knox, 2016: p. 2). Instead, posthumanism moves 'man' from centre stage to account for the material and non-human elements in a learning network. This questions the "deep-rooted humanism [that] not only endures, but powerfully shapes, and is shaped by, the kind of education on offer" (Knox, 2016: p. 1). This does not assume an anti-humanist stance or elision of the human, but rather, by accounting for material as well as the social, a foregrounding of "hybrid entanglements" and the "persistent and transformative relations" (Knox, 2016: p. 3) between elements in the assemblage that produces learning. This entanglement is reflective of Hacking's socially focused frame. But it is in the acknowledgement of "the vital, self-organising and yet non-naturalistic structure of living matter itself" (Braidotti, 2013: p. 2) and the treatment of the material as "continuous with and in fact embedded in the immaterial and the human" (Fenwick, 2010: p. 105) that Hacking is usefully extended by a posthuman approach.

Matter matters

The crucial element of any posthuman approach is the role of matter. A sociomaterial approach, in particular, acknowledges the social, the context, the matter, and the technologies as "continuously acting on each other to bring forth objects and knowledge" (Fenwick, 2010: p. 105); where knowledge is "emergent from the webs of interconnections between heterogeneous entities, both human and non-human." (Jones, 2016: p. 484). As Tara Fenwick eloquently argues:

> [T]he sociomaterial can help reveal the dynamics that are actually constituting what comprises everyday life, including learning. Humans and what they take to be their "learning" and "social" processes do not float, distinct, in "contexts" of work that can be conceptualized and dismissed as a wash of material "stuff" and spaces. The things that assemble these contexts…are continuously acting on each other to bring forth objects and knowledge. (Fenwick, 2010: p. 105)

Although Hacking de-centres the human to some degree, both through positioning the human kind as contingent on the specifics of time and place and in foregrounding Foucauldian discourse, he does not make specific account for the material and technological. But there is nothing, I think, in his work to preclude the material. Instead, it was simply not his focus, though it must be ours if we want to fully map a kind, and particularly the kind of a networked learner. As Fenwick (2010) argues, this is not about reifying 'stuff', but looking at the whole network, mapping the formation of all the elements and their interaction (both human and non-human), and understanding learning as embedded and emergent in material intra-action.

This allows for a certain symmetry in exploring networked learning which includes technologies and technological processes, yet does not mean we have to lose sight of the human actor amongst all other actants. Jones (2016) argues that through design and intentional action, a 'conscious human element' can be retained,

though it is "distinctly different from a reductive methodological individualism" (Jones, 2016: p. 485). Here, then, the:

> individual human actor is constrained by their social role and entangled in interactions with a variety of material forces which enable and constrain them. Within networks some nodes are more influential than others and over time patterns of entanglement in assemblages can produce effects that are persistent and instantiate power relations.   (Jones 2016: p. 485)

For Jones, such stability is dependent on "intentional activity and active co-construction" (Jones 2016: p. 486). This means we can explore a networked learner as not only a person connected to other people (tutors, peers, communities of practice) and information resources, but as *constructed* through those connections. That is, as a social being produced through the relationships between people and technologies. Crucially, here technology is not a neutral element of a network, nor a simple avenue of provision to resources, but an active participant in the network that makes up the kind of a networked learner.

As a very simple example, our MScDE student's experience of connection to tutors and fellow students through a Skype-based text chat (a high energy, fast paced exchange of instant messages) will be very different from their experience of connection to those same people through a VLE forum. Here discussion can be more measured, articulated and threaded conversations allow for a sense of turn-taking lacking in a Skype text exchange. The experience of learning, and thus, what it means to be a learner, in those two digital environments is different.

It is challenging to keep a focus on multiple parts, particularly when such parts are constantly shifting in relation to each other, but exploring the "dynamic materialism" through which things emerge, mutually constituting each other can enables us to move beyond existing binaries like subject | object and stop drawing lines between 'things'. Instead, keeping both the human and non-human to the fore, knowledge can be understood in terms of relations and distributed agency (Fenwick et al., 2015) and as a "specific, embodied, and relational; enacted in the encounter" (Knox, 2016: p. 27) where "no agent or knowledge has an essential existence outside a given network: nothing is given in the order of things, but performs itself into existence" (Fenwick and Edwards 2011: p. 5). This 'performance into existence' is precisely at the heart of Hacking's own 'dynamic nominalism' and why binaries like ontology | epistemology can be collapsed.

Collapsing binaries

The posthuman turn not away from epistemology but towards an onto-epistemology (Barad 2007; Mol, 2002), collapsing binaries such as ontology | epistemology and subject |object, allowing us to understand a kind not as indifferent | interactive or natural | human, but as ontologically inseparable from the other intra-acting agencies in the assemblage (Barad, 2007; Braidotti, 2013). The dynamic nominalism of a kind, then, resonates with posthuman arguments that "what we make and what (we think) we are co-evolve together" (Hayles, 2006: p. 164). This carries the implication that "we have never been only or wholly human, if by "human" we meant that creature familiar to us from the Enlightenment and its legacy" (Wolfe, 2007) because we are never an ontologically separate essence. Importantly, as Haxell (2016) argues, if we can accept that we were never human, we may be able to see ourselves as 'relationally constructed' and use a posthuman approach to the 'very ordinary'.

This has profound implications for how we imagine a learner might take on a kind. If a kind is both a way of being and understanding, then it cannot be learned through the standard subject | object interactions, or even by accounting for some mediating artefact within those interactions. Instead, learning to become a kind and learning what a kind is go hand-in-hand through intra-action, through the relation processes between not only subjects and objects, but materials, technologies, social processes and so on. Learning, then, cannot be undertaken individually nor expressed as an inherent property of the learner, but instead only as a part of the assemblage of connections.

For networked learning, these collapsing binaries trouble our ideas of what it means to be part of a network ontologically. The subject of the networked learner is not separate from the objects they engage with (be it other people or resources); nor is their knowledge of what it means to be a networked learner separable from their experience of being part of the network. The elements of the network co-produce the networked learner.

Persistent re-workings

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Dohn, NB, de Laat, M, Jandrić, P & Ryberg, T

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Importantly, the network is ever-changing as different people, resources and technologies shift in and out of the assemblage. Learning, then, is always about 'becoming' and not 'having become' – it will always be a process of a constantly shifting network of relations, not a product of a fixed point in time and space. There is no moment where the kind has been fully taken up, where it can be performed and assessed as a thing that is fully learned. The moving target is always on the move, the kind is always being re-worked and re-shaped both as an object of study and a way of being. The learner is always learning *about* and learning to *be,* and the kind that the learner strives to take on is always emerging, never fully emerged, from the constantly nebulous and shifting assemblage of elements only realised through their relation to each other (Knox, 2016; Barad, 2007).

For our MScDE student learning to be a digital educator, this means that what it is to be in digital education is always changing, as they learn about and experience that network of rapidly changing technologies, ever developing pedagogies and their constantly revised understanding of themselves in relation to the ever-moving field of digital education. As the network of learning grows and changes, so does the networked learner.

Conclusion

The work of Ian Hacking around kinds, dynamic nominalism, moving targets and looping effects offers a useful perspective on understanding learning in networks. It is, however, limited by Hacking's interest in the social and requires enhancement and extension through the exploration of resonances with posthuman approaches to learning. By bringing Hacking into a sociomaterial context, we can diffractively map and explore the relationship between learning and becoming. As Karen Barad (2012: para. 5) says, "Diffractive readings bring inventive provocations; they are good to think with." Hacking, together with posthuman approaches, provokes us to reconsider what it means to be 'made up', which in turn furthers our understanding of networked learning. Networks *produce* networked learners, not just enable networked learning.

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209