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The affective intensities of datafied space

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ABSTRACT

The concept of datafication - which refers to the idea that many aspects of life can be rendered into digital data which can subsequently be analysed and used to understand, predict and guide interventions in society - has been both enthusiastically engaged with and critically deconstructed in recent literatures. In this article, we explore the relevance of datification for understanding the spatiality of everyday life. In doing so, we argue for a refigured concept of datafication through theoretical and empirical scholarship focused on affect. We suggest that a renewed concept of datafication - that is, of datafied space - offers a framework for how we dwell in and move through a world where digital data about humans have an increasing presence. To make our arguments, we offer an account of a recent study of cycle-commuting and self-tracking in Melbourne and Canberra, Australia. We used helmet-mounted action cameras and video interviews in a 'digital sensory ethnography' to explore the entanglement of bodies, bicycles, digital devices, data and affect that shape how people move through and make sense of what we call 'datafied space'.

1. Introduction

The concept of datafication - which refers to the idea that many aspects of life can be rendered into digital data which can subsequently be analysed and used to understand, predict and guide interventions in society (van Dijck, 2014) - has been both enthusiastically engaged with and critically deconstructed in recent literatures (Lupton, 2016b; Neff and Nafus, 2016). In this article, we explore the relevance of datafication for understanding the spatiality of everyday life. In doing so, we argue for a refigured concept of datafication through theoretical and empirical scholarship focused on affect. Critically re-worked, we suggest that a renewed concept of datafication - that is, of datafied space - offers a framework for how we dwell in and move through a world where digital data about humans have an increasing presence.

Urban environments, in varying ways and in different national and cultural contexts, are imbricated with digital technologies, content and media. They are sites where people make sense of their physical and embodied movements through familiar localities with and by datafication practices. To examine how these environments are experienced, in this article we focus on the example of how personal self-tracking data are bestowed with affective meaning in our everyday worlds, and how they participate in the ways people make sense of their movements through those worlds. We argue that the affective intensities that emerge through such everyday encounters with data play a crucial role in how people experience and understand the datafied spaces of the everyday as they move in and through these environments.

The affective qualities and affordances of people's encounters with and through digital technologies and media have been a strong focus in cognate fields of research, such as mobile media research (Goggin and Hjorth, 2014). Lifelogging has been a recent focus of academic attention, involving 'the capture of personal experiences for personal use' (Caprani et al., 2013) using digital and sensor technologies, including wearable cameras (Wang and Smeaton, 2013: 147) (Fors et al., 2016). Self-tracking research is a relative newcomer in this context (Neff and Nafus, 2016; Lupton, 2016a). However, as we show below, self-tracking is an ideal example with which to explore this question, and might also help drive new ways in which people can perceive and experience urban environments and their affordances. This is for two key reasons. First, self-tracking data have emerged as being integral to the ways in which affective intensities of the movements and activities of

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everyday life emerge for their users: for instance, through people's engagements with the data generated through smartphone apps, or mobile and wearable devices to track such elements of their bodies as heart rate, weight, number of steps, location, distances travelled, sleep or consumption of calories, such as Fitbits. Second, the ways in which people make sense of and determine their responses to self-tracking data are important to how they imagine their future selves and their future situatedness in the world of data. As Anderson (2014: 10) remarks, 'affect pertains to capacities rather than existing properties of the body. Affects are about what a body may be able to do in any given situation, in addition to what it currently is doing and has done'. Thus, as we will show, affect provides a link to the future capacities of the body and is both enabled by and emerges from self-tracking as a relational practice amongst people, data, digital devices, and space.

In this article we are interested how people are both affected by and in turn affect the production and meaning of personal data. In bringing affect to an ethnography of data, we turn to Anderson's (2014: 9) definition of it as 'two-sided': 'It consists of bodily capacities to affect *and* be affected that emerge and develop in concert … Straight away a body is always imbricated in a set of relations that extend beyond it and constitute it. Capacities are always collectively formed.' However, rather than using this to theorise the relationship between personal data and power, we propose that before such a theory can properly be developed we first need to understand how the affective qualities and affordances of both personal and big data emerge within everyday experiential and representational worlds. This can be addressed through ethnographic analysis of the affects/effects of data in continuing everyday activity in the world, as it emerges as part of particular spatial configurations. Furthermore, because affects are about capacities and depend on other bodies, 'they can never be exhaustively specified in advance' (Anderson, 2014: 10) and thus are emergent and potential. This recognition of bodily capacity and emergence, and of the relationality between people and their environments means that self-tracking is an ideal vehicle by which to investigate the relationships between space and data by way of affect. We seek to develop a theory of datafied space as affective and reflect on how affect is implicated in relations of personal data and power.

To develop the discussion below, we build on existing work that explores how affect is woven into interactions between people, digital devices, code and software (Thrift and French, 2002; Kitchin and Dodge, 2011), and more generally between the human and non-human. We bring this together with accounts of the affective aspects of self-tracking and other encounters with personal digital data which have been noted in our own and others' work. Indeed, methodologically self-tracking offers a telling route through which to encounter the affects/effects of digital data, since as Anderson puts it: 'Affects are always-already imbricated with other dimensions of life without being reducible to other elements' (2014: 14). This means taking seriously, for example, moments where participants have described feeling 'distraught' or devastated at the loss or non-acquisition of their own or a friend's data or when self-trackers express their motivations in terms of aspirations to better health or fear about disease (Ruckenstein, 2014). Here we interrogate and advance these points further by developing a dialogue between scholarship in geographies of space and affect, digital ethnography and our own ethnographic materials.

To do so, we draw on a recent project that focused on the use of digital self-tracking technology in regular cycle commuting. We develop a notion of datafied space that emerges through affective encounters by investigating how data were woven into our research participants' understanding of their surroundings, themselves and their futures. We begin by outlining our treatment of space and its affective potential and capacity, linking this to data and digital materiality. We then turn to the empirical data from a new study of self-tracking cycle commuters in Melbourne and Canberra, Australia, drawing out a range of examples to demonstrate our arguments about the essential inclusion of affect in considerations of datafied space.

2. Conceptualising space as datafied

In this section we bring together a processual view of space, with a revised and phenomenologically focused account of datafication, to propose how we might understand theoretically how data are part of everyday experiential and processual worlds. A precedent for this is Taylor's (2016) work on cycling in London, which unpacks some of the ways that 'A body-in-place surfaces a panoply of data and relations', leading to speculation on 'how the data might suggest ways of doing thing differently'. Accordingly, we take Massey's (2005) characterisation of space as a starting point for how we approach datafied space in this article, based on her three crucial propositions. First, that it is 'the product of interrelations; as constituted through interactions' (2005: 9) that occur at a range of scales from the intimate to the global. Second, that space is 'the sphere of the possibility of the existence of multiplicity' in which the unexpected can take place, where 'otherwise unconnected narratives may be brought into contact, or previously connected ones may be wrenched apart' (2005: 111). Third, that space is 'always under construction … it is never finished; never closed' (2005: 9).

Massey's characterisation here gestures towards the futurity of space, tinted with a sense of possibility or chance encounter. For Massey, space is a means to consider relationality and connection amongst various material, immaterial, human and non-human elements - which we argue include digital data. Her account offers a compelling way to understand where and how we are situated in the world. With reference to digital data, it enables us to consider the contingency, openness and uncertainty that can characterise the global and local configurations through which personal data, and big data and its analysis, are constituted and made meaningful. As we develop further below, in particular it unsettles the notion that data can objectively represent or stand for the world, because the world is in movement.

Massey compares the processual and relational spatialities she describes with the flattening objectification of traditional cartography; something that we can think of as analogous to the cutting through of data visualisations. Massey's (2005: 107) critique of mapping is that it can 'give the impression that space is a surface' with connections already determined and made. Instead, she asks what might happen if the map 'presents us with a heterogeneity of *processes*? Then it will not be an already-interconnected whole but an ongoing product of interconnections and not. Then it will always be unfinished and open.' If we apply this to a notion of datafied space, then what emerges is a critique of ways of understanding data as complete and visualisable, and of self-tracking data in particular as providing a totalising and static map of movement. Taylor (2016) makes a similar point in arguing that self-tracking and bio-sensing data 'are not merely where one has gone, but also a set of possibilities for how and where things can (or can't) materialise'. Thus, datafied space is here processual and emergent, a way of thinking about one's body and surroundings that is ongoing and unfinished. As we will show, self-tracking helps us see this in practice.

When brought together with recent accounts of affect as developed in human geography, this approach to spatiality has further implications for our understanding of data. The environments in and through which processual movements occur are as