Understanding citizen data practices from a feminist perspective: embodiment and the ethics of care

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Abstract

This chapter traces the relevance of practice theory for understanding datafication from a feminist perspective. The first section shows how the practice paradigm, as developed in the social sciences and in media studies, can be applied in the study of data practices. Here it is argued that the notion of data practice incorporates a range of practices that may not be deemed or intended to be explicitly political, and thus allows us to analyse data politics and power relations in seemingly mundane, everyday settings. The chapter then introduces how the notion of 'care', as developed in feminist science and technology studies (de la Bellacasa, 2011), can be a productive analytical and critical approach when scrutinizing the manifestation of power relations in data practices. Approaching data power in everyday data practices as 'matters of care' allows us to account for their affective, embodied, and material elements, including the habitually devalued human labour of data users, activists, producers, consumers, and citizens. Outlining briefly justice (Dencik et al., 2016; Taylor 2017) and ethics approaches to data power, it is suggested that the notion of care inserts particularity and empathy in social justice frameworks. In this way the chapter maps a theoretical roadmap of feminist data studies and practice theory, which is focused on materiality and embodiment and is committed to unsettling the power relation of race, class, gender, and ability in datafied worlds.

Introduction: Understanding data practices

The spread of data-driven systems and technologies such as social media and tracking apps has meant that citizen media also become saturated by data. Community organizations learn to use open data for advocacy and to reflect on their own 'data burden' (Darkin et al., 2016). Young unemployed women are algorithmically categorized as NEET (not in education, employment or training) by a digital bureaucratic system that appears as gender free and apolitical (Thornham & Gomez 2017). Open governmental data are used for advocacy and campaigning, or are used otherwise politically for activism and social change, for example in humanitarian aid (Millan & Gutierrez, 2015; Gutierrez, 2018). At the same time, matters of privacy, sharing and access to personal data is a hot matter of legal and cultural negotiations such as the EU General Data Protection Regulation (GDPR). And feminists use hashtags to coordinate street protests, but also to evaluate cultural changes around gender equality at a global scale (Mendes et al., 2018). These are only a few examples of data-saturated citizen media practices in the last decade. These citizen media practices are complemented by data

practices of communities and groups that do not necessarily see themselves as political in any way, such as those of early adopters of emerging technologies, especially the Quantified Self. At the same time, the standardization of self-measuring practices, especially in relation to productivity, health and fitness among ordinary people makes everyday lived experience a site of analytical interest from a data practice perspective.

Why focus on practices, and what might a practice-based understanding of data entail? There are good reasons for focusing on data practices. Critical data studies and other disciplines have approached critical questions around data but have mainly considered the production and employment of data (Iliadis & Russo, 2016; Neff et al., 2017). So far in scholarly work around big data and artificial intelligence (AI) the focus remains data – defining data, understanding data, framing data, and making sense of data. The object of study remains *data* even in Pink et al's (2017) anthropological take on mundane everyday contexts, of self-tracking cycling commuters. Scholars have studied the measurable aspects of data (Kitchin & McArdle, 2016); the experiential or 'lived' aspects of data (Lupton, 2016); and the ontological status of data (Thornham & Gomez, 2018). But here I am arguing for a shift of focus to *practices*, and further, a theorization of data practices informed by feminist STS thinking on 'matters of care'. As Wajcman (1991) explained in an early account of science, technologies, and gender, technologies are both what people do and what they know. They form a part of human activities and practices, they are not just textual or material. Of course, when Wajcman was writing computer technologies were bits of silicon, plastic, and metal. Today technologies of data seem to have lost their materiality as physical objects and cultural representations celebrate their longevity and immateriality (Fotopoulou, 2018). The challenge is thus to reinstate the materiality of data, to think about labouring bodies, invisible human practices, and social relations and activities. This change of focus is of key epistemological importance for critical thought that prioritizes the agency of humans and the significance of sociocultural contexts over accounts of object-oriented ontologies of data.

This chapter traces how practice theory is of relevance to critical data studies from a feminist science and technology studies (STS) perspective. Drawing from social practice and media practice theory, it conceptualizes data practices as those sets of dynamic actions and materialities, competencies and meanings that entail data, digital technologies, human and non-human actors. The first section starts by showing how the practice paradigm, as it has been developed in the social sciences, and specifically in media studies, can be applied in the study of data practices. It does so by thinking through the idea of data practices as media and communicative practices. Here I argue that a focus on *data practices* is needed because it incorporates a wider range of practices than those designated by the term 'data activism' and thus allows us to analyse the politics and power relations inherent in seemingly mundane, everyday practices. To illustrate the advantages of using a practice perspective for data practices that may not be deemed or intended to be explicitly political, the chapter then moves on to present three key examples: algorithmic disobedience, self-tracking, and the collection of data by community organizations. Then the chapter takes a step further. It introduces the notion of care, as developed by feminist STS scholars (de la Bellacasa, 2011; Murphy, 2015) to think about the political and epistemological implications of

conceptualising data practices as practices of care. In this last section, I argue that data practices are material and embodied, as they involve human labour and power relations. In this way the chapter draws a theoretical roadmap for a media practice theory as it intersects with a feminist data studies, which is committed to unsettling the power relation of race, class, gender, and ability in datafied worlds.

Data and practice theory: Data practices as media practices

The concept of practice has been developed by social theorists and has met interesting applications and expansions in a range of disciplines, including media studies. As I argue next, this paradigm, and specifically the framework of media practices, can be valuable when applied to the study of data practices, especially when we consider data practices to be intrinsically communicative.

Thinking with social practice theory

Social theorists of 'practice' and especially Shove et al. (2012) define social practices as constituted through three main elements: a) 'meanings' (the ideas, values and affects), b) 'materials' (such as devices, technological objects, and generally 'stuff'), and c) 'competences' (the skills, literacies and knowledges). This triple axis is useful in theorising data practices because 'practices' cannot be studied in isolation – they form wider constellations (Hui et al., 2017). Hui and colleagues (2017) think of social practices as a nexus, which can add an important element of dynamics and complexity to the conceptualization of data practices, especially since it also accounts for practitioners. We can thus understand the nexus of data practices to consist of:

- a wider constellations of practitioners (users, subjects, citizens);
- meanings and understandings of data technologies and systems (think for instance of reactions to algorithmically informed advertising and predictive analytics);
- the materiality of data (such as the environmental impact of data storage and smart city infrastructures, as well as technological objects such as drones and wearable sensors);
- and the competencies that are necessary in order to participate in these data practices (for example the critical skills and data literacies that are required for personal data safety).

It is important to also stress the dynamic aspect of data practices. Williams and colleagues' analysis of self-tracking as a communicative and social practice highlights the temporal and dynamic aspects of practices, and defines them as 'embedded social forms that emerge (and die) over long periods during which they must be constantly renewed and reproduced' (2018, p. 2). Similarly to self-tracking, other practices involving data also change, as the technologies, skills, and meanings of data change, and people play an active part in this process of shaping ideas about data practices. It is thus essential to incorporate a consideration of the dynamics of data practices through this quadruple analytical prism, which can help us reveal wider structures of power in a context of rapidly changing technologies and innovation. As I argue in the next parts of this section, putting

communication and human actors (as users, producers, consumers, and citizens) at the heart of understanding data practices is crucial in this task.

The usefulness of media practice theory

In media studies, practice theory scholars have tried to reconcile the difficult divide between representation, meanings and affects, and media artefacts and technologies, and have focused on what people do with the media. Media practice theory is key to critically approaching everyday practices and the domestication of data related technologies and systems (Couldry, 2004; Postill, 2009). Communicative practices and digital media practices have been thought to encompass not only the transfer of information between activists and audiences, but also knowledge-making practices and learning spaces for media production (Mattoni, 2012). They are therefore pivotal in the formation of publics and civil society. They have been shown for instance to facilitate thick social bonds between actors in the case of the World Social Forum and to help citizens form networks of solidarity across national borders that shape their social realities and everyday lives (Stephansen, 2016). In this work, media practice theory moves beyond thinking of the media in terms of publicizing matters of concern, to think about social production and the material forces and relations that surround the use of media technologies in micro-spaces (such as activist and citizen spaces of political organizing). Media practices have also been understood to bring feminist and queer activists together in shared spaces in order to learn and experiment with digital technologies, but also with political concepts and ideas, and serve as opportunities for forming networks, community and political subjectivity (Fotopoulou 2017). An exploration of activist media practices in these examples involves both the symbolic and the material. To develop a framework of social and media practice theory for data practices thus, we need first to frame data practices as communicative and media practices, encompassing social lives and everyday realities.

Alongside media practice theory, citizen media scholarship is particularly relevant to thinking about data related activist and citizen practices because it focuses on everyday practices and spaces of empowerment beyond conventional understandings of citizenship such as voting rights (Rodríguez, 2001). Citizen participation in local governance programmes encompasses smart cities (Kitchin, 2014) and open data and journalism (Baack, 2015). For example, Emiliano Treré (2018) has researched the role of algorithms in politics and analysed practices of algorithmic resistance of the Spanish *Indignados,* noting the significance of advanced digital media competencies. Milan and Gutierrez (2017) have examined the empowering elements of people's active engagement with data in the Amazon region. In these cases participation in data-related practices is crucial for enacting citizenship. As the same authors have argued elsewhere pro-active data activism can be thought as a new form of citizens' media because it critically approaches big data and attempts to alter the relationships of citizens to automated data collection (Milan & Gutierrez, 2015). However, the notion of citizens' media cannot absorb the tension between 'the individual and the collective dimension of organized collective action' (Milan & Gutierrez, 2015, p. 124). In other words, there is often too much emphasis put on how new media and data technologies enable participation for individual citizens, rather than how these can be the means for collective

action. But can we think about politics and spaces of empowerment beyond the study of activists' practices and engagement with data? Although applying a citizens' media framework is relevant and useful, there is wider scope in developing data practice as a conceptual tool beyond the study of resistances to top-down data-collection or explicitly political engagement with data for advocacy purposes.

Beyond activists and citizens

The premise of advancing the notion of *data practice* in this chapter (rather than, say, data activism) and understanding citizens' media beyond its application to the study of data activists, is to avoid marginalization of the political issues that pertain big data. Data practices allow the political ecology to re-enter everyday life and maintain big data as a wider political issue in contemporary societies – not just an issue to be resolved by data activists. For instance, it has been noted how anti-surveillance resistance practices such as encryption and anonymization are limited among civil society organizations, and activists' interest in privacy and data protection is very narrow (Dencik et al., 2016). This indicates the extent to which top-down data-based systems and practices are culturally and socially accepted. Changes in the structure of labour and changing understandings of joy and work with the introduction of digital tools for self-management (Moore, 2017), the commercialization of leisure time and the transformation of body exercise into labour (Till, 2014), and the acceleration of time with digital technologies (Wajcman, 2018), along with widespread data-based surveillance seem to dovetail with a remodelled ideology of participation and empowerment. As voluntary data sharing complements automated data collection and data surveillance, understandings of digital participation and the boundaries of what constitutes citizenship, agency, and social justice also shift. These are relevant beyond the study of grassroots and civil society organizations that resist automated data collection or manipulate big data for activism. They are relevant in the study of social and cultural practices that use data systems beyond collective action, and where the individual is implicated through occupying identities different to that of 'activist' or 'active citizen'.

Applying the lessons of media practice theory and Shove et al.'s (2012) framework of social practices, we may adopt an analogous emphasis on the social and cultural significance of data-related practices, which implicates human actors from a variety of positions and identities: as users, producers, consumers, and citizens. These practices usually include standard data collection practices – those of individuals, and those of businesses and governance. They can be empowering, such as the practices of data activism (Milan & Van der Velden, 2018) or practices of algorithmic disobedience that are mentioned next in this chapter. They may be hurtful practices such as those of data discrimination and inequality (Crawford, 2016; Metcalf & Crawford, 2016; Eubanks, 2018); or mainly mundane, everyday practices that appear seamless and normalized, and take place in both public and private spaces, such as skimming through a dating site like Grindr or Tinder (see Albury et al., 2017) or logging a run using a mobile phone or other wearable device.

Data practices: can the mundane be subversive?

Self-tracking

The example of a mundane everyday activity such as self-tracking is a good example for understanding data practices as communicative and media practices. This is because self-tracking not only aims at communicating achievements to a wider social network, but it also mediates professional and family life, health and wellbeing. So although self-tracking has been approached as a means for the collection of health data, and for motivating behavioural changes through self-care and wellbeing practices, it is predominately a media and communications practice (Lomborg and Fradsen, 2016; Fotopoulou et al., 2016). Similarly, other data related practices such as those of hackathons and citizen science are predominately cultural and social, aiming at forming groups of affinity and belonging, learning from each other and sharing ideas and information, while also enacting 'entrepreunerial citizenship' (Irani, 2016). The practices of the quantified self movement and the spaces they enable do not link to advocacy in any explicit way; they do however enable spaces of knowledge sharing and technical expertise, while they facilitate public debate around data privacy, ownership and innovation policies (Fotopoulou, 2014; 2018). Meet-ups are spaces of meaning making, of forming subjectivity and a thick web of relations between the commercial industry of sensors and other technologies, users of these technologies, and designer and other professionals. They are also gendered places where patriarchal and heteronormative exclusions are reproduced (Fotopoulou, 2017; Sander, 2017). Thus, applying a media practice lens to data-related everyday activities and routines should start from the proposition that data practices are communicative, and that they are also practices of mediation – mediating complex social and power relations.

Algorithmic disobedience

One interesting example of data practices that ostensibly cannot be categorized as 'data activism' are various forms of manipulation of data practised by consumers and employees as a form of disobedience to automated data collection. These are less spectacular than organized anti-state activism or organized citizen action, and they are practiced by ordinary people as part of their everyday activities.

Data collection permeates our everyday life, through ad targeting of specific social groups and user profiles on Facebook for example. But these uses of our data by certain media technologies, platforms, and their algorithms are not transparent; at the same time, they are socially blind, and reproduce social inequalities. Many artists and designers have tried to experiment with these problematic aspects of data collection. For example, *The Library of Missing Data* is a project that comments critically on citizen data practices and specifically the interplay between data collection and missing data sets – where there is an expectation for the data to be there (Onuoha, 2016). Other artists and practitioners actively try to resist data collection and to take back control by developing devices, apps, and other media that spoof data. *Unfit Bits* (http://www.unfitbits.com) is an online DIY fitness data spoofing website that aims to help users mislead insurance companies. It guides users through simple tricks that

help them fake an active lifestyle by producing a wealth of data. The heurism 'Free Your Fitness from Yourself' on the website sums up how the project problematizes the use of fitness tracking by insurance companies to incentivize health insurance premiums. According to one of the creators, Surya Mattu (2017), fitness tracking devices like Fitbit are technologically plain: they are essentially accelerometers. However, their marketing campaigns make huge claims about their role in advancing consumer health and wellbeing. Here thus the subversive data practices of spoofing fitness data reveal the role of meanings and ideas about innovation that are communicated about the technological object. Engaging in data spoofing practices allows users to question ideas of innovation in science and technology in relation to commercial devices, but also importantly to challenge the meanings of self-care that are embedded in such commercial self-tracking devices. *Unfit bits* highlights the role of trust, in both the device and the data collection process, which is required for these devices to actually operate as an aid to a healthier life.

'Imagine a future where incentivization is replaced by punishment', provokes Mattu (2017). Such a scenario does not seem too far off as all aspects of our everyday lives are targeted by AI and the data industry more generally. In this context data practices of data and algorithmic disobedience seem necessary. Disobedient data practices involve the active refusal to conform to predicated use patterns of data collecting devices and platforms, for example. Thus, such practices of disobedience manifest how data practices are dynamic and how they can be changed when their meanings, competences, and materiality shift. These disruptive practices can be as simple as changing user name on Facebook or adopting a persona avatar. In this case, the meaning of providing personal data to the platform changes, and this alters the experience of use. Mattu (2017) urges: 'Don't just engage in the way that the device is designed, but ask it to give you a bad experience'. Although in cases like *Unfit Bits* the inspiration comes from artists, algorithmic disobedience and other kinds of resistances, such as plain disengagement, are important strategies that 'ordinary' people use in order to survive the changing management practices of increasingly quantified workplaces (see Moore, 2018)

Data practices and care
Everyday life data practices and what people do with data are experiential and often embodied. Helen Kennedy has argued for a data studies informed by emotions and the everyday in what she calls the 'phenomenology of datafied agency' (Kennedy, 2018) in order to understand the conditions and possibilities for data activism. My approach here however seeks to make media practice scholarship politically relevant beyond the study of citizens' media and data activism. For this I will now turn to the productive exchange between media and critical studies with feminist STS because I would like to underline the indispensable contribution of a feminist perspective to the study of data practices, as they are informed by frameworks of media and social practice, and to critical data studies more generally.

Feminist STS and critical care
Feminist STS has a long trajectory of unsettling hegemonic narratives and histories of ableism, colonialism, gender, and race. It is committed to situatedness and embodiment and

has highlighted the importance of subjective and partial perspectives (Haraway, 1991; Harding, 1991). What is more, STS has long addressed the conundrum of materiality of technologies by establishing the social, cultural, and political factors that shape technologies, and by focusing on the practices, knowledges, and networks of actors and things. In Barad's framework of posthumanist performativity (2007) the discursive, social, and material are overlapping rather than conflicting elements of certain technoscientific practices. For Barad meanings and matter are both present in practices, while bodies are discursive. Applying new materialism to digital health technologies research has analysed the material relations that surround the collection of data and the interplay of material forces within unstable assemblages that emerge around bodies and technologies (Fox, 2017). This work has been taken up to discuss dynamic human-data assemblages and the 'liveliness' of data (Lupton, 2018). However, my interest is more in how data come to matter from an ethical and political perspective.

I am intrigued by frameworks of critical care practice as they have developed in feminist STS (Martin et al., 2015; de la Bellacasa, Jarrett, & O'Riordan, 2017) and particularly inspired by De la Bellacasa (2010), and later Murphy's (2015, p. 721) provocation that we need to move from '"matters of fact" to "matters of concern" to "matters of care", the affective entanglements through which things come to matter'. De la Bellacasa (2010) describes what an ethos of care in studying science and technology may entail. '[C]are connotes attention and worry for those who can be harmed by an assemblage but whose voices are less valued, as are their concerns and need for care – for example, trees and flowers, babies in prams whose noses stroll at the level of [sports utility vehicle] SUV's exhaust pipes, cyclists or older people' (2010: 92). Because of the embodied, experiential, and material character of data practices, a materialist analysis cannot leave out invisible forms of labour, such as emotional and caring labour, but also what has been termed as immaterial, free, or affective labour in relation to digital media.

Three considerations for an ethos of care when analysing data practices
An ethos of care when studying the affective and material elements that constitute practices of data, data rights, and citizen media includes accounting for the often invisible and devalued ordinary human labour involved in producing data in everyday contexts or analysing data within organizations. The narratives of data and the language of data compel us to translate all everyday activities and experiences into measurable activities, and potentially into generating value activities. The materialities of productive activity are however 'messy' (Lupton, 2016). We may think of those of the productive labouring body that gets tracked using biosensors, for example, or all the material processes of setting up infrastructures and maintaining them in terms of technical expertise. It is important to make visible the labour involved in sustaining data systems and how indispensable the human labourer is in implementing their use.

First, we may ask, as Sheilla Jasanoff (2017) urges us to, whose views, standpoints, and framing questions shape data collection and analysis, and what is the extent of what is

represented or remains invisible or underrepresented. Critical AI studies have also recently documented problems of gender discrimination, for example voice recognition systems that have problems 'hearing' women, Google searches not showing highly managerial job listings to women, and Siri giving inadequate instructions about women's health (Campolo et al., 2017). From a practice perspective however, an analysis of bias should not be limited to datasets but the practices and infrastructures of data collection too, and particularly the power asymmetries between data collector and generator (Dalton, Taylor, & Thatcher, 2016), but also within data analysis teams. As Hanna Wallach (an AI researcher and cofounder of the Women in Machine Learning Conference) reports, such teams are still male-dominated and conditioned by white privilege, with only 13.5% of women working in machine learning (Snow, 2018). Feminist Marxist critiques of affective labour (Jarrett, 2016; Terranova, 2000; Weeks, 2007) are mostly useful when thinking about women's value-producing activity beyond work. To further follow the gesture of historical feminist critiques of science and technology, emerging technologies are shaped by the interests of professionals whose matters of concern get represented. When it comes to data, this is the systematic, ordered, rational, and detailed forms of knowledge (Kitchin, 2017). With such a small number of women and other people from disadvantaged social groups working in the development of data systems there is pressing need for work that focuses on care and messiness.

Second, care practices and affective labour have been shown to be key within citizen media practices and activist organizing (Boler et al., 2014). But beyond noting the social elements and the communicative practices of activist groups, and as data practices meet citizen media practices, we should be asking: what and who is involved in collecting, cleaning, accessing, and maintaining datasets among civil society actors? Data analysis practices have now become an increasing 'community data burden' for voluntary and community organizations who need often to collect excessive information in order to seek funding (Darkin et al., 2016). In their position statement Darkin and colleagues (2016) suggest the implementation of a community data agreement between local government and other funding bodies and grant professionals that 'recognises and takes action to change methods of data collection which place undue strain on organisations and citizens'', but also 'recognises examples of good community data practice that ensure compassion and dignity within the sector' (5). This focus of the research team on affect (compassion), on hearing the experiences of volunteers and citizens, and on dignity introduces the central aspect of care in approaching citizen data practices. It also indicates how a care ethos allows us to understand temporality differently to those expected by data collection regimes and productive time, and a different conceptualization of timescales.

Third, a care ethos also entails analysing the changing relations within numerous social systems (health and social care, family units, education, governments, advocacy organizations) where data-based systems increasingly mediate social and financial relations but remain largely invisible. This is important because often critical examinations of datafication, data systems, and societies err towards technological determinism, blaming the apps, algorithms, and mobile phones instead of looking closely at institutional contexts and the problematic power relations within them. As Wajcman (2018, p. 6) notes

The speed, convenience and flexibility provided for the users of the multitude of service apps on offer require human labour to operate. Those who actually drive the Uber taxis, who deliver the pizzas for Deliveroo, who clean your clothes when you use a laundry app, who do the DIY when you use TaskRabbit.

In this example, it is not just the affective and care labour of the Uber taxi driver whilst in the workplace that we would need to attend to, but also the challenging working conditions in the sharing economy and the way affluent people's privilege relates to the taxi driver's precarious status.

Thus, and as De la Bellacasa (2010) also reminds us, drawing from Latour and Haraway, we need to care for the technologies we are critical about in order to remain responsible for their social justice impact and to really affect their use, no matter how passionate, angry, and critical we may be. This is particularly important when we think of the powerful interests of the industries that relate to AI and big data.

Representing matters of fact and sociotechnical assemblages as matters of care is to intervene in the articulation of ethically and politically demanding issues. The point is not only to expose or reveal invisible labours of care, but also to generate care. In strongly stratified technoscientific worlds, erased concerns do not just become visible by following the articulate and assembled concerns composing a thing, nor does generating care happen by counting the participants present in an issue. In the perspective proposed here, generating care means counting in participants and issues who have not managed or are not likely to succeed in articulating their concerns (de la Bellacasa, 2011, p. 94).

Linnet Taylor (2017) provides an interesting example of how data technologies of control co-evolve with empowering uses. She describes how refugees use satellite-based GPS and mapping technologies on their phones to find their way through Europe, the same technologies that are used by border agencies to control migration. Counting in migrants' empowering data practices here is important because the study of data practices involves exclusions and objectifications that come with using data in different social arrangements.

Data, social justice, and feminist care ethics

Although ethnographies of media practices have been particularly useful in the past in bringing forward how alternative media production can empower citizens, with the power asymmetries and epistemological problems that are inherent in studying data critically, ethnographic and phenomenological studies of data practices are simply not enough. *We need a production of standpoints*. As de la Bellacasa (2011) notes, standpoints come with the question 'Why do we care'? Why do we care about data practices and social justice? And for whom?

'Data justice' has been proposed as a new conceptual tool for analyzing the implications of data driven systems and data assemblages for social transformations beyond individual privacy (Dencik et al., 2016). Care and justice have often been thought to counter each other and to represent different approaches to moral reasoning, as feminist ethics evolved over the

years. Thus, care has been thought to encompass the empathetic and relational approaches to moral issues, while justice tends to value rational action, impartiality, and universality, favouring discourses of rights and responsibilities (Held, 2006). However, we need both justice and care, for different domains. 'A care perspective relies centrally on a conception of human good and entails a deep commitment to a transformative politics' (Deveaux in Held, 2006, p. 64). As well as seeing data governance, regulating the data-driven economy and data privacy laws as the essential components for a just society, a social and media practice approach to data that is guided by feminist ethics of care and is committed to the production of standpoints may focus: on how we bring up children in societies where face recognition technologies are routinely used even for babies (Barassi, 2018); on intervening actively to make the breastpump not suck (D'Ignazio et al., 2016); on taking a standpoint to enhancing critical and creative capacities of audiences and communities when implementing education and data literacies (Bhargava et al., 2016; Das et al., 2018; Fotopoulou, 2018b); and problematising how people interact in a world increasingly populated by drones (Suchman, 2015), wearable devices, and other 'unreal' technoscientific objects (O'Riordan, 2017). Such work not only demonstrates how to adopt a care perspective in the production of knowledge and scholarship, or a 'critical care practice' as a researcher, but also seeks to incite their readers to care (Martin et al., 2015, p. 12). Turning to 'matters of care' instead of matters of fact, or a priori notions of social justice 'suggests that we make of them what is needed to generate more caring relationships' (De la Bellacasa, 2011, p. 100) for a more just world. I have already discussed how citizens' media and practice theory scholarship have of course encouraged thinking about social bonds, trust, relationships, and particularities, although citizenship and justice have mainly been defined in terms of rights and responsibilities. A framework of care through a feminist ethics lens further helps us understand the political potential of connections and situations in the data practices of people occupying a variety of identities and within ordinary contexts.

Conclusion

To close this chapter, there is no doubt that 'care' is a slippery concept and has been misused in colonial and other contexts of subordination (Martin et al., 2015). Self-care is also a strong narrative circulating in the media and in health policy, and alongside the discourse of the 'common good', it heavily underpins the moral economy of sharing data for research purposes (see Fotopoulou, 2018). By foregrounding the politics of care and invoking groundbreaking work in feminist STS, here I have been attentive to the various ways in which 'care' can be a productive analytical and critical approach especially when we scrutinize how power relations manifest in data practices. Guided by the question 'Why do we care?' the notion of care inserts particularity and empathy in social justice frameworks, but notably draws a theoretical roadmap of a data practice theory that is focused on materiality and embodiment.

Thinking through Shove et al.'s (2012) social practice theory, and media practice theory, in this chapter I have conceptualized data practices as entities of actions and materialities, competencies, and meanings that entail data technologies, human and non-human actors. I

have then shown how data practices are social and communicative practices that can be studied with the application of media practice theory. Building on this work, the chapter makes two key interventions in understanding data practices: First, I argue that attention to 'data practices' allows us to analyse the power relations and political significance of seemingly mundane everyday practices that are not explicitly political or usually classified as activism. The politics of big data go beyond the efforts of data activists and organized citizen action. I have thus suggested that a data practice approach can help us study the power relations of self-tracking in the workplace for example but also disengagement, unintended use patterns and non-organized data manipulation. What is more, data practice incorporates a wider range of practices of human actors who occupy a range of identities: citizens, users, consumers, and employees, and are dynamic.

The second key argument that this chapter makes is that data practices are material and embodied and therefore need to be understood through the lens of a feminist ethics of care. Approaching the political issues and the power relations inherent in data practices as 'matters of care' allows us to account for their affective, embodied, and material aspects, including the habitually devalued human labour of data users, activists, producers, consumers, and citizens. Through a close reading of feminist STS care ethics, I have discussed how an ethos of care in studying data practices can be focusing on but not limited to: gender and other power assymetries within data analysis teams; care and affective labour in data collection within voluntary sector and civil society organizations; the changing power relations within institutions, including work, family, and education. Following da la Bellacasa's (2011) prompt, I have suggested that a social and media practice approach to data that is additionally guided by feminist ethics of care needs to move beyond ethnographic and phenomenological accounts of everyday practices. It needs to be committed to the production of standpoints; in other words, to actively seek to incite readers to care for a more just world.

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