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From networked to quantified self: Self tracking and the moral economy of data sharing

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Introduction

The formation of identity in digital media has been a central concern for media studies and other scholars in the last decade. The networked self is performed through interaction, connection, display and the management of visibility through privacy. Self-representation in this context is always a conversation between written, visual and quantitative forms (Rettberg, 2014). Tampering the affordances of social networking platforms, it is constructed in relation to the management of sociality and as Papacharissi (2010) explains, this construction entails performances of the self across platforms and for a variety of audiences. Self-representation in social media largely relies on experiencing online platforms as spatial environments – the self moves through "imagined geographies of place" (Papacharissi, 2010: 306).

As self-tracking technologies and practices (Lupton, 2014; Neff and Nafus, 2016) such as apps and gadgets become ordinary however, for example with the inclusion of pedometers in mobile phones, it becomes increasingly evident that the construction of the "quantified self" is not merely another form of self-representation in digital culture, or just another aspect of the networked self. It requires special attention not least because cultural understandings of quantification and data link to wider questions of power relations. The quantified self is a cultural trend whose pioneers are people from the Quantified Self community (with capital QS), who undertake a range of practices of self-monitoring, data collection, management and analysis, with the use of wearable sensors and mobile technologies, in order to produce knowledge about the self.

Although sociological and other theoretical frameworks of the quantified self have largely done so through analysis of governmentality, surveillance and self-monitoring, here my interest is with the values that shape and are shaped by the emerging culture of quantification and personal informatics, and the cultural understandings of data "sharing" - the sharing of personal data in the form of life logs, medical data or just public records. In this chapter, I suggest that new practices of gathering data, through personal informatics, active self-tracking or passive and ubiquitous monitoring, are changing how people understand the Self, their personal and social responsibility. In what follows, I outline the key characteristics of the shift from networked to quantified self. I draw from ethnographic and media research that examined understandings of personal data amongst digital health start-up entrepreneurs and self-quantifiers in the San Francisco Bay Area[1]. Reflecting on this research, I frame self-tracking as a ritualistic performance of the self, and argue that contemporary cultural understandings of self tracking and data sharing are underpinned by a moral economy. Its values prescribe new ways of connecting with others and enacting "good citizenship" through data practices, and normalizes these practices as our means to an altruistic sociality. In other words, sharing data and self-quantifying operate as ritualistic performances of the "good citizen".

First, I revisit contested notions of Big Data and the implications that the intensification of data monitoring presents for identity, sociality and citizenship. Then I move on to trace values of data longevity, permanence but also the right to self-erasure, as they manifest both in cultural texts, such as the fiction novels *The Circle* and *Super Sad True Love Story*, and in legal schemes such as the Right to be Forgotten. Third, I consider the moral undertones in the framing of personal data disclosure as "sharing" by apps and platforms such as *PatientsLikeMe*. Using some key examples from my ethnographic study I next outline the delicate dance between commercialization and self-knowledge in the Quantified Self community. Finally, I discuss the performative and material aspects of the quantified self, and the centrality of ritual. These five sections work together to explicate the construction of the quantified self in digital media and with self-tracking technologies.

1) The imagination of data

Big Data are changing the shape of the social fabric; they change the ways in which people connect and the ways in which commons and the public good are defined. Jamie Sherman (2015) has sketched an application of Walter Benjamin essay on *Art in the Age of Reproduction* in today's data quantification and tracking practices by drawing a parallel between the proliferation of images - about which Benjamin wrote- and the proliferation of data today. There are indeed important reasons to study the proliferation of data, and particularly how both the active and willing, as well as the passive collection and sharing of personal data alters how individuals and populations perceive themselves. First, there are privacy concerns that relate to the ability to share and collect data with the use of ICTs, especially mobile devices, and a clear need for new regulation of monitoring and surveillance (Andrejevic, 2013). Although there are important differences with the American legal framework, in Europe the controversial EU Data Retention Directive [2006/24/EC] for instance allows telecommunications companies to store customer metadata for six months (Brown, 2013). Beyond legal frameworks, devices and interfaces often allow self tracking by default – for example the operating system on iPhones iOS/10 performs location tracking and ad tracking by default, whereas older versions (iOS / 8) did not offer a feature for turning off distance tracking. Therefore questions arise about how far existing legal framework that guide design, and companies can effectively protect our constitutional rights as democratic citizens. Then, there are ethical and social concerns that link to the sharing of health data and the new meanings of surveillance in everyday life settings, in the context of care (French and Smith, 2013). The ubiquity of mobile devices and sensors allows close observation of behavioral change in a gamified way, which even makes self-surveillance pleasurable (Whitson, 2013). Such significant changes in what we allow to be monitored, how we participate in the monitoring and how we benefit from data, as individuals and as communities, need critical exploration.

Users, consumers and patients play an active part in the process of collecting personal data; they track, obtain data, interpret infographics, determine their meaning, and attempt behavioral changes[2]. The vision of agency and empowerment of the quantified self is linked to these everyday practices of active self-tracking (Fotopoulou and O'Riordan, 2015). But as noted, self-tracking and data sharing is complemented by passive tracking, performed by collecting information even when the user does not purposefully do the tracking. The estimate of 50 billion devices and

objects (buildings, roads, household appliances) will be connected online by 2020, which reminds us how we all contribute data in some way or another, even when we do so unintentionally. As Internet users we are of course becoming increasingly used to such un-intentionality, as social media data mining becomes ordinary (Kennedy 2016). Allowing users only limited degrees of manual adjustment, social media platforms that count and sort online data, such as Google and Facebook, work automatically via algorithm (van Dijck, 2013). If controlling one's own visibility online is an important right to self-knowledge (Couldry et al., 2014), the question then is how can we think about the self in relation to self-tracking, passive data tracking and the ways in which data may be shared or publicly disclosed? Can we trust data to tell the whole story about who we are, to make us aware of ourselves as individuals and as collectivities?

Self-tracking practices are inexorably linked to a turbulent and fast forming landscape demarcated by the digital health and biosensor industry. In the US, the Affordable Care Act (ACA) has encouraged the specialization of accelerators (companies that help start-ups) according to ownership, purpose, or affiliation. Most health care accelerators such as Rock Health, Blueprint Health, Healthbox, Janssen Labs, and Start-Up Health are focused on digital health, which also intersects with biotechnology/pharma, medical technology, health care services, health care IT, and genomics, whereas the vast majority of those are based in California (Suennen, 2014). In the UK, NHS England envisions online portals and mobile phone apps where patients can access click-and-collect services for health and social care (Zesty, 2015). Academic researchers, particularly in the medical sciences, also turn to the Internet as a huge collection of datasets. And many start-up Internet companies are also entering the field of tracking personal data for use in research or for commercial use, and they offer a new form of Internet service provision in the fields of digital health and biomedical research.

One may argue that this seer volume, velocity and variety of data, what is called Big Data, is in itself a good reason for trusting measured data. Big Data is however still a contested term, and indeed "data" more generally operate as a powerful discursive tool (Thornham and Gómez Cruz, 2016). "Big Data changes the definition of knowledge. By privileging large-scale quantitative approaches, it sidelines other

forms of analysis and limits the kinds of questions that can be asked: this has important normative and political consequences (Stephansen and Couldry, 2014). Boyd and Crawford also note that Big Data loses its meaning when taken out of context (2012: 670). Personal data are not just numbers; they are culturally produced and interpreted (Gitelman, 2013). "Data need to be imagined as data to exist and function as such, and the imagination of data entails an interpretive base" (Gitelman, 2013, p.2). In other words, *data* only ever become *information* when they are interpreted in a context that is defined relative to the interests of particular actors (Kallinikos, 2009). Therefore the implications of data for identity, sociality, and citizenship relate to how such data will be interpreted and analyzed, and how and what kinds of knowledge is being made from these data. With smart, wearable and other self-tracking technologies, we are experiencing a fundamental shift from previous forms of mediated self-disclosure and identity performance: it is the shift to quantity rather than form or content (what have been understood as the traditional generic aspects of digital and non-digital cultural products) from which meaning is being made.

2) All these emotions, all these yearnings, all these data

Lenny Abramov, the main character in Gary Shteyngart's satirical romance *Super Sad True Love Story* exclaims:

> "My hair would continue to gray, and then one day, it would fall out entirely, and then, on a day meaninglessly close to the present one, meaninglessly like the present one, I would disappear from the earth. And all these emotions, all these yearnings, all these data, if that helps to clinch the enormity of what I'm talking about, would be gone. And that's what immortality means. It means selfishness. My generations belief that each one of us matters more than you or anyone else would think."

This sense of permanence, of data outliving physical bodies and lives permeates Shteyngart's book, but also Rucker's *The Lifebox, the Seashell and the Soul* – where the Livebox stores immortality and the world is largely computational[3]. Most interesting though is Dave Eggers' exploration of ranking, status and sociality in a

world where all personal information is made public and where data are constantly being generated. *The Circle* is the story of Mae, a naive and easily manipulated character, who makes it into a dream Google-like job situated in transparent buildings. A story about a Silicon Valley utopia that turns into a dystopia, *The Circle* introduces some of the key ideas that illustrate a shift from networked to quantified self. Participating in social networks is not really an option for the main character. Mae wants to remain inside the elite circle of trend-setting visionaries. In this world, the activity of rating is tantamount to the public performance of the self – a presence to be rated and evaluated, and to be self-sustained. Her encounter with data in social profiles, and as we learn from her, *our* encounters with personal analytics acquires, as Cheryl Turkle has pointed out, potentially *existential* importance (2011). Data and measuring, quantifying everything seems to give a sense of permanence, of longevity – a proof of existence. "Data – It will be here next year and next century", as one of the character in the book concludes.

This understanding of personal data as permanent and of self-tracking as a way of life that could secure access to a person's *real* and immortal self is also widely prevalent in policy documents at European and US level. Here however we can recognize a different cultural anxiety – the negotiation between disclosure and transparency, as well as the anxiety about the centrality of memory in the construction of both personal and collective identity. In an era that has been described as the "end of forgetting" (Bossewithch and Sinnreich, 2013), informational disclosure to unspecified, future audiences makes the concept of "context collapse" (Marwick and boyd, 2011) even more problematic. Resisting a self that becomes "transparent" (Lanzing 2016) presupposes finding ways to navigate between, on the one hand, the conflicting demands for visibility and openness, and on the other hand the "Right to be forgotten".

Openness has expanded from socio-cultural vision of knowledge commons in computer software to electronics hardware (Powell 2015), to a necessary component of creating and governing commons. The flip side of this coin is the right to oblivion (or "Right to be forgotten"), which forms part of the data protection regulation by the European Commission. It aims to oblige public and private organizations to destroy or anonymize personal data in every format, paper or electronic, once the purpose for

which they were created and gathered is achieved. But as it has been observed, an effective right to oblivion means that we need to move to a multidimensional conceptualization of the right to privacy (Xanthoulis 2012). In addition to control over what can be measured and how it can be shared, here the concern and the control over visibility is associated to what can be erased and forgotten. It is a way of controlling self-representation and future profiling by escaping our algorithmic past. Met with substantial resistance in the US, the regulation has been seen to limit how the internet operates as a global system of sharing information, and even as a great threat to free speech (Rosen 2011). We could say that, as our identities are becoming increasingly dispersed and shared through multifaceted digital presence, autonomy and privacy are not preconditions of having a self any more. To even have a self one needs to be able to manage their personal data and all those digital traces that inform predictive algorithms and construct different future instances of that self, quantified and networked.

But what happens with public records and the self-concept of communities, individual citizens and societies? It is often said that those who control the past control the future. There are different versions of the past, which can be told as stories without being claimed as objective facts. Public administration changes give us vital information about the self-concept of that society and its interaction with the state (Bundsgaard 2007). Such changes entail access of citizens to public archives for personal or for research reasons. But when individuals have multiple versions of identity, spread over social media platforms, genomic profiling, and self tracking devices and apps - and when the state moves many of its responsibilities to private corporations - the matter of who has access to social memory and in what ways become more complex.

3) "Secrets are Lies. Sharing is Caring. Privacy is theft"

In *The Circle*, through a series of manipulative mind games, Mae Holland reaches the three quotes that distil the essence of this dystopian world-within-a-world: "Secrets are Lies, Sharing is caring, Privacy is theft". This uncanny play with words signifies a re-attribution of, not property as Engels and Marx would hope, but of data access and information. Alluding to Proudhon's slogan that "property is theft", and the call for

the abolition of private property that Marx and Engels advocated, the novel invites us to consider the idea that *privacy and property* have similar value. This proposition may not be after all that far fetched. Without doubt we already know how Facebook sells our data to advertisers and how data is a new form of capital. The current vision communicated by large corporations, especially in the digital health industry, concurs with Mae Holland's principles. For instance, in "5 Insights in Digital Health" (2014) big CEO's state that those who control capital control the data and vice versa.

Just like property rights, questions of data ownership, privacy rights, personal informatics flows and disclosure are infused with moral significance. Hacking, identity theft and piracy are considered violations of intellectual ownership and as such, they are inevitably deemed as immoral acts. But when it comes to personal data ownership the motto "privacy is theft" alludes to a reversal of this existing moral order: the violation here is the owners' *exclusivity* to their own data. The quote is certainly an oxymoron but it gives us a flavor of the paradoxical aspects of datafication and digital culture more generally, where personal information disclosure is being reframed as "sharing".

[Figure 1]Screenshop of Meforyou.org

One of the many websites advocating the sharing of personal data for the common good and for the advancement of scientific research is *Meforyou.com* (Figure 1). The video featured on the website is a close shot of a little white girl's face, called Georgia, while the narrator explains that she is not a statistic but a person with hopes, and a risk to develop breast cancer. The discourse of "all in this together" and dedicated action that concludes the video and saturates the website overall, it calls for a contribution to the commons, and it makes a case for a moral obligation to contribute to the repository. Similarly, the military *Million veteran program* recruits participants without requiring consent[4]. The project *Health Data Exploration* in their report "Personal Data for the Public Good" (HDE, 2014) articulate a vision of transforming public health with personal data provided voluntarily by self-trackers, in order to complement more traditional clinical or public health data collection. Emil Chiauzzi, Research Director of *PatientsLikeMe* notes that there are vast opportunities afforded by the collection of passive data when it comes to infering patient behavior.

The video *Data for Good*, featured on the *PatientsLikeMe* website, invokes the dream of turning patient experience into voice (Figure 2). We see a manifestation of this same vision in many examples of online platforms inviting personal data sharing directly with researchers in clinical experiments[5] or platforms for open user-donated genetic data, such as *OpenSNP*.

[Figure2]Patients like Me screenshot Live Better, Together!

Beyond health data, the collection of passive data such as real-time traffic data is also advocated as a means to the greater social good. For example, in the article "Would You Share Private Data for the Good of City Planning?" (Grabar, 2015) location data collection from individuals is thought to help understanding city planning and therefore understanding people. The question posed here is "How can data utopians convince the hoi polloi to share their comings and goings?". Although there are clear answers to this question[6], it is the posing of the question that remains problematic. The rhetoric of the common good in smart and sustainable city projects is sticky because it may in fact give rise to distinct material-political arrangements and practices that recasts who or what counts as a citizen (Gabrys, 2014, p.7). The distinction between early adopters of innovation technology and ordinary people is a hierarchical one. Citizenship then becomes less about the enactment of rights and more about governance through self-monitoring and other data practices.

Although the value system that imbues data practices is predominately a code of moral behaviors that pertain sociality and community, it is supported by and is based on financial imperatives. For example, insurance companies provide attractive incentives of lower premiums to customers who share personal data (Lupton, 2016). In some platforms, users rely on paid subscriptions for punishment if they do not train enough or overeat (Cederström & Spicer, 2015). The "tracked self" is hence faced with increasing challenges of navigating through conflicting sets of values around technological innovation – those prescribed by communities of users such as the Quantified Self, and those of commercial enterprise (Barta and Neff, 2015).

4) People's understandings of data sharing

California and Silicon Valley are hubs of activity. The Quantified Self (QS) is a phenomenon born in the San Francisco area, and can be best understood in the context of Californian techno-utopianism.

The quantified self is a dynamic identity that is produced by a community through interpretations of its own self-tracking activity, while its guiding premise remains to enable self-knowledge through self-tracking and large-scale data gathering. This production of meta-narratives about the meaning of self-tracking and practices in technoscientific capitalism make the QS a particularly interesting community (Fotopoulou, 2014). The QS is a dynamic media culture that constantly reinvents itself and its position in existing social structures through the narratives that it produces and circulates in the media. *Wired* is central to how ideas and definitions about the QS have disseminated since 2006 (Ruckenstein and Pantzar, 2015).

[Figure 3]This image was provided by Mike McDearmon (2014), a product designer that I interviewed, who also logs his running creatively in a photoblog. This screenshot shows the custom analysis that he has developed in order to better understand his personal data.

My research showed that people who use self-tracking for health or well-being purposes in their everyday life are often inclined to share their personal data with others. Social media (Twitter, weblogs) are predominately used for sharing visualizations and reports of data, whereas increasingly new social spaces are created, such as forums and specialized online platforms, where users exchange information about hacking into personal data (e.g. Fitbit, Quantified Self discussion forum, *Patients Like Me*). Interviews and participation in various events during my research made it clear that the motivation behind sharing information with others is often to learn (See Figure 3). Sharing personal concerns and data enables the production of knowledge about shared medical conditions and shared interests, and it also enables the development of technical skills (self-hacking).This finding is consistent with the wider framing of commercial wearable devices and fitness tracking in the media; as the hype of "big data is the new gold" calmed down after 2013, those technologies and practices have been framed with discourses of self-responsibility, empowerment and agency (Fotopoulou and O'Riordan, 2015; Lupton 2016). Self-knowledge

through sharing dovetails with all the above, although sharing over ownership of data seems to have become a new mode of user experience.

The Quantified Self community has been thought to enact a form of "soft resistance" to the hegemony of Big Data, and self-quantifiers have been understood as DIY actors who create and hack smaller, fragmented databases (Nafus and Sherman, 2014). However, as Whitney Erin Boesel (2014) noted in our conversation, users do not consciously enact "resistance"; they don't necessarily challenge existing hierarchies within science and technology when they are using a product such as a tracking app. They rather aim at improving their lives but by aligning themselves with the aims of the start-up or bigger company who sells the product for profit. What is more, nothing stops the industry from using smaller scale databases – in fact wearable sensors, fitness and medical companies mainly harvest these kinds of data. Individuals who tracked and self-quantified in my study were skeptical about the use of their personal data by companies and third parties without their consent, and were wary about who will have access to their data in the future. They had concerns about the collection, ownership and sharing of data that were derived from tracking for fitness, pleasure and self-improvement, but interestingly, these concerns where significantly played down when it came to tracking for health by patients and caregivers.

This delicate dance between the commercial goals of companies and developers, and the aims for self-determination and self-knowledge of self-quantifiers manifests explicitly in the medical sector. Here, medical professionals and companies encourage the adoption of self-tracking tools in a top-down manner; sharing data with both is compulsory. In his attempt to release his personal data collected by his pacemaker company, one of my informants, Hugo Campos (2014) entered a long-lasting exchange with the industry (those who sell the pace maker and own the data it records) and the medical establishment. Since medical professionals would only grant him with a health report, and not the original data-log, self-tracking became for him a practice of life and death significance, as he called it. The user even attempted to hack the pacemaker, with the help of a programmer, in order to gain access to his own health data. This case indicates not only how much user control versus corporate control over data is a political issue, but also, how the emerging communities of data tracking represent trust in data-logs as a means of knowing oneself.

Of course not everyone is a "data junkie", obsessed with access to huge amounts of their raw data – something that in any case requires advanced programming skills in order to make sense. And not everyone I talked to was a "genetic exhibitionist" either, as is the case with those who share genetic profiles in the social network *OpenSNP* (Hernandez, 2015). This is a key reason why developers of apps such as *Human*, a pedometer software that aims to motivate 30 minutes of minimum daily physical activity in users, are moving towards minimal interface design and a simple form of self-tracking. As the CEO told me, "instead of assuming that throwing immense amounts of data will change their behavior, we focused on distilling" (Olmos, 2014). At the same time, start-ups are becoming more alert to how privacy-sensitive personal data are. In response, they anonymize everything in the back-end, so that it is impossible even for them to individualize single cases. Apps like *Human* are targeted to a more average user demographic, who is not necessarily interested in how the app works or what is inside the box.

5) Data subjectivity: Ritual, performativity, and labour

In digital culture, practices of sharing, reconfiguring and copying have been promoted with models such as mash-ups[7], and have been understood as paradigmatic shifts to the idea of the modern individual. These practices celebrate how the cultural product remains unfinished, and a non-linear production process, with contributions from the collective, across time and space (Sinnreiich, 2016)[8]. At its extreme, the moral and ethical dimensions of these practices have been even rendered into a recognized religion, Kopimism, as a way of reinstating the fallacy of copyright and of navigating questions of agency, power and identity in networked society (Sinnreich, 2016). When it comes to self-tracking and data collection, the unfinished, fragmented product is the self, emerging through an endless process of reconstruction across shared datasets and statistical analyses. The quantified self is thus not merely another form of representation, a "data- double" (Harding, 2016) or a cultural Other that results from dataveillance. Its performative and material nature is based on the one hand, in the vision that data can be infinitely recycled, repurposed and "correlated" (Mayer-Schönberger and Cukier 2013), and that our future selves, social lives and personal experiences can be predicted. On the other hand, it is performative because it

is enacted through the telling of stories and re-enactments of identity in spaces of sharing such as the community meetings of the Quantified Self meetups, where meaning about technology is being made.

Indeed self-tracking and sharing data are practices that are framed as pre-emptive: they come with the promise that risk can be eliminated in the future, as long as we get our acts together and collect more accurate data. Digital technologies that involve tracking personal behavior and quantified data are becoming central in discourses of patient empowerment not only in the US, but also increasingly in UK and EU contexts. As noted elsewhere, mundane applications such as FitBit operate to anchor big visions of such low-risk futures and an innovation-led society (Fotopoulou and O'Riordan, 2015).

Collective knowledge production, such as crowdsourcing in cultural and museum projects, has been thought to feed into "communicative capitalism" (Dean, 2009). Indeed in models of collective ownership and production that relate to the sharing of personal data, what is uncritically advocated and celebrated is the unpaid or free labor (Terranova, 2004) of a body that is productive and works around the clock, during sleep, work and leisure. Everyday, all day, activity is being tracked for the extraction of statistical data/value, under the premise of the greater "common good". Although the work that this entails appears simple and automated, it requires multiple modes of engagement from the user; for example in the case of FitBit, interpreting data graphs, responding to motivational messages and sharing stories, techniques and data via social networking. What we see here, as I have argued elsewhere is the formation of a distinct *data subjectivity* for which continuous productivity in all aspects of everyday life is essential (Fotopoulou and O'Riordan, 2016). The monitoring of such productivity operates as a rewarding practice that provides reassurance about being an ideal, proactive neoliberal citizen and good consumer who enacts self-responsibility and self-awareness.

Although the repetition of logging of information or checking of graphs and stats is a mundane activity, it is at the same time a ritualistic performance of the self. We may think here the repetitive practices of letter and journal writing (Rettberg 2014; O'Riordan, 2017) and logging information on an everyday basis, but importantly,

how publicizing and sharing such information introduces elements from dogmas, such as self-confession and self-revelation. Accounting publicly for everyday activities and measures resembles giving an account to the higher order in confession; here of course it is not a religious institution, but closer to what Shapin (1990) calls "regimes of scientific knowledge assurance", and the scientific societies of gentlemen. In the era of big data and citizen science, shaped by discourses of empowerment, self-responsibility and data-collectivism, this regime of knowledge assurance is being transferred to the Crowd (or the smaller, controlled crowd of the QS show-and-tell meet-up setting). The invitation to share what was previously conceived as personal is a performance of the "good citizen" and responsibility to others. And in contrast to the traditional representational forms of the diary or the journal, the public space and context of this ritualistic performance and self-disclosure is undefined.

Conclusion

I started this Chapter with the question: how is our engagement with self-tracking technologies such as apps and devices, changing the ways we perform and enact identity? Drawing from analysis of cultural texts, and on fieldwork with communities and individuals who practise self-tracking, I have examined the key aspects that indicate a shift from the networked to the quantified self, and explored the construction of the quantified self. The fast-forming landscape of tracking devices and data collection appears like a "data-topia", where citizens share information and empower themselves through data sharing, whilst contributing to the "common good". I suggested that our cultural understandings of collecting and sharing personal data are underpinned by a set of moral values.

First, we can identify a belief in the permanence and immortality of data, and a trust in their legitimacy. Navigating through the conflicting demands of visibility and openness, and the "right to be forgotten", to erase the past, is a key task, as our identities become increasingly dispersed and shared through self-representations in social media platforms, self-tracking apps, genomic and algorithmic profiling. The self here is less about autonomy and more about efficient management of this major undertaking.

Second, the framing of personal data disclosure as "sharing" by apps and platforms such as *PatientsLikeMe*, as well as location data in smart city projects, indicates a reversal of the existing moral order (where someone has exclusive ownership of their personal information, eloquently expressed in the motto "Privacy is theft"), and is particularly problematic. What is more, data sharing and self-quantifying normalize dataveillance and ubiquitous computing as our key access points to sociality and citizenship. At a time when public spaces and commons are vanishing, and for lack of other processes and spaces for meaningful sharing, sharing personal data becomes a key means of manifesting altruism.

Apart from the moral values of sharing for the common good however, I have underlined how the values of self-awareness and "knowledge through numbers", as well as those of technological innovation and marketization are shaping the Quantified Self community. These values are not necessarily moral but they delineate acceptable sociality within the community.

Who we are, and how we perceive and enact identity, citizenship and belonging, as our societies become progressively enmeshed with data-driven technologies and communication systems, is not merely another form of representation, or a case of "data- doubles". The Self in times of quantification is performative and material because data can be recycled and repurposed, to tell different stories about us, about the past and the future. The stories we tell about the data we collect, and the meanings we make by interpreting these data, are performative re-enactments of our identities. We read ourselves as texts through our data-stories, and this loop of reading and adjusting ourselves through technologies is always performative. But data-stories are not always interesting - the Self is in fact performed in the mundane acts of repetition and continuous productivity, which are highly ritualistic as they introduce elements from dogmas such as self-confession. And it is by attending particularly to the ritualistic performances of the ideal, neoliberal "good", sharing citizen that manifest in the practice of self-tracking and public self-disclosure, that we can unravel how power operates. As is the case with previous instances of technological change, understanding the operation of power remains a key critical task for us, at the intersections of digital culture with data.

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1 During the research a series of interviews was conducted, that addressed questions of sharing, ownership and value of personal data, with a number of organisations, companies and individuals. The project was funded by the Research Council UK Digital Economy Theme, New Economic Models in the Digital Economy Network (NEMODE).

2 Active tracking usually involves devices that contain a pedometer and accelerometer (measuring speed and distance travelled), temperature sensor, and some even include heart rate sensor. Some recognized first-generation quantified tracking devices and applications a are Fitbit, myZeo, BodyMedia, MapMyRun, RunKeeper, MoodPanda, Nike Fuelband, The Eatery, Luminosity's Brain Trainer, and the NeuroSky and Emotiv brain-computer interfaces (BCI).

[3] See Bossewich and Sinnreich (2013) for other examples of fictional texts that examine the link between memory and identity in.

4 The project suggests that only when researchers link to profiles (names and other identifying information) is there a need for protection.

5 See Van Dijck and Poell (2016) for a detailed analysis of health apps.

[6] The proposed solution is anonymisation of data before they are channelled into governmental projects, and promoting the value of open data for the common good.

[7] Mash ups blend pre-recorded sound tracks, usually by overlaying the vocal track of one song seamlessly over the instrumental track of another.

8 Similarly the idea of content curation finds many applications in online culture world today, including projects about heritage (Boon, 2011; Nilsen et al., 2012) and online identity (Boyd and Ellison, 2007, 2008; Cox et al., 2008; Durrant et al., 2011). As a practice pertaining creative production, content curation has been understood to disrupt hierarchical modes of production (Parry, 2007; Hooper-Greenhill, 2000), but there are also more cynical applications of the concept in the online marketing world.