This book provides an empirical and philosophical investigation of selftracking practices. In recent years, there has been an explosion of apps and devices that enable the data capturing and monitoring of everyday activities, behaviours and habits. Encouraged by movements such as the Quantified Self, a growing number of people are embracing this culture of quantification and tracking in the spirit improving their health and wellbeing.

The aim of this book is to enhance understanding of this fast-growin trend, bringing together scholars who are working at the forefront of the critical study of self-tracking practices. Each chapter provides a different conceptual lens through which one can examine these practices, while grounding the discussion in relevant empirical examples.

From phenomenology to discourse analysis, from questions of identity privacy and agency to issues of surveillance and tracking at the workplace, this edited collection takes on a wide, and yet focused, approach to the timely topic of self-tracking. It constitutes a useful companion for scholars, students and everyday users interested in the Quantified Self phenomenon.

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## SELF-TRACKING

Empirical and Philosophical Investigations

Edited by Btihaj Ajana



Taylor, Phil, and Peter Bain. 1999. "An Assembly Line in the Head": Work and Employee Relations in the Call Centre. *Industrial Relations Journal* 30 (2): 101–117.

Thompson, P., and S. Ackroyd. 1995. All Quiet on the Workplace Front? Critique of Recent Trends in British Industrial Sociology. *Sociology* 29: 615–633.

#### CHAPTER 8

# Data Privacy: Users' Thoughts on Quantified Self Personal Data

Keith Spiller, Kirstie Ball, Arosha Bandara, Maureen Meadows, Ciaran McCormick, Bashar Nuseibeh and Blaine A. Price

Abstract The logging of personal data has been shown to offer many benefits for those wanting to, for example, get fitter, get stronger or get to know themselves better. In this chapter, we concentrate on the privacy values attributed to Quantified-Self (QS) data. Using evidence taken from research interviews, this chapter reviews privacy in relation to personal data and offers an empirical perspective on how QS users view and value the data they collect, and often display publically, as well as their

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attitudes towards the handling of their data by QS device manufacturers. users value their QS privacy. We question appreciations of privacy in QS data and elaborate on how

Keywords Self-tracking · Quantified Self · Personal data · Privacy

#### INTRODUCTION

data to their own advantage (Olson 2014a, b; Advisory 2014; Schumer a personal expectation based on the fact that everyone is free to avoid disseminated and scrutinised. Indeed privacy, as we understand it, is sents some ambiguity as to how users can understand and appreciate vacy pledge as outlined here; however, the wording of the Pledge pre is sold, they will insist on the purchasing company, maintaining the pri your PII [personally identifiable information] can be sold...' (Fitbit merger, bankruptcy, sale of assets or reorganization of our company, you' and later still attests, 'If it is necessary in connection with the sale, may share or sell aggregated, de-identified data that does not identify assurance, 'We will never sell your data, and will only share personally and conditions provided by other device manufacturers—giving the 2015). These companies do offer assurances. To cite one example, lenge because QS companies sell data to third parties, as well as use the unwanted attention (Wilkins 1987). The use of QS data presents a chaldata privacy of this kind; particularly how it is collected, processed, Solove (2006) makes a convincing argument for considerations for data contain intimate details of users' lives and their activities, and they sleep, how many calories they eat or when they menstruate. QS know' users-for instance, how often a user goes for a run, how well aspects of their lives and ultimately to get to know themselves better. of the devices. The goal of QS is often to allow users to improve on unteer data to QS devices, shared platforms and to the manufacturers vacy of their data. The premise of our enquiry centres on how users vol-In this chapter, we draw from research interviews with two groups of 2016). The final comment does go on to explain that if the company identifiable data when you direct us to'. The pledge later states, 'Fitbit Fitbit offers a Privacy Pledge-which is representative of the terms The data also allow device manufacturers and third parties to 'get to Quantified Self (QS) users and examine their understanding of the pri-

> of their data by QS manufacturers. and often display publicly, as well as their attitudes towards the handling timent, we contend, may be evident in the views of QS users. In what care what happens, so long as it does not happen to me'. And this sennothing to fear', Solove (2006; 2007) has argued, translates as 'I don't thetically. Indifferent views such as 'I have nothing to hide, so therefore stances is often an assumed and unquestioned privilege, one enjoys apamanufacturers to extract value from the data. Privacy in these circumdata (Boyd 2014), and these are the building blocks of digital comcan include name, address, date of birth, credit card number or QS follows, we question how QS users view and value the data they collect the transfer of data, allows users to participate in QS and also allows munications, transactions and QS. It is this information that smooths the ownership of their QS data. In digital contexts, aspects such as PII

### BETTERING ONESELI

ise policies (see Newman 2014; Shemkus 2015). indication of customer activities and lifestyle choices can help to custom nies now encourage users to share QS personal data, because an accurate hospital (Farmer et al. 2007; Carter 2015). Moreover, insurance compaown symptoms at home rather than being monitored by professionals in ter habits (Davenport 2015). Or, in medicine, patients monitoring their ing food intake to aid weight loss or tracking activities to generate betresponsibilisation is being incentivised in QS terms, for instance, track-Moore and Robinson 2015). One does not have to look far to see how austerity that aids the growth of the economic market (Whitson 2013; eral economy model favouring privatisation, de-regulation and fiscal QS work are aspects of neoliberal responsibilisations, for example, a libto make their own informed decisions (Barnett 2003). Pressing in this from New Labour's modernistic agenda to empower local governments work on QS data as a form of self-responsibilisation—a term taken Indeed, the collection and management of personal data have promoted sis often centres on taking control of health, fitness, calorie intake, etc. terment and motivational practices (Suel 2013; Swan 2013); empha-Till 2014). Key focuses amongst this work have been on efficiency, betas well as the technological developments of QS devices (Swan 2012; The QS literature has tended to focus on improvements enabled by data,

so on (Gilmore 2015; Schüll 2016). understanding, habitualisation of use, the standardisation of data sets and ously recording activities may hinder enjoyment or spontaneity. Neither reliance on the power of the data may affect internalised norms, personal body shapes or bodily performances (Lupton 2013). Equally, continument move towards cultivating homogenous standards of, for instance, tions and tensions, evident in moments of quantifying bodily functions, sensations and rhythms. Lupton (2016, 2015) argues that the juxtaposiduction, ovulation, menstruation-responses focal to bodily functions, agenda. Whereas, female QS recording tends to concentrate on reproquency of activity and follows a distinctly competitive or comparative user, for instance, typically records performance, such as duration or freconception and sexual performance (Lupton 2013, 2014, 2016). A male the body or the self can be fully extrapolated from the data, and an overperform an ordering of the 'dis-ordered' body. QS goals and their attaincal enquiry has presented some very insightful commentary on issues of been quick to embrace the many potentials of self-tracking, and critidata are taking increasingly diverse forms. For instance, sexual health has Alongside such motivational processes, the collection and use of QS

2011; Adage 2013; Gao et al. 2014). in the literature, namely around QS data ownership and its use (Fuchs like-minded users (Choe et al. 2014). However, there are fissures evident senses of belonging to a QS group as well as benefits of sharing with happen. Other factors may also emerge, such as neuroticism and/or and visualising personal data in such a way present robust verification of style issues or knowledge gaps (Nafus and Sherman 2014). Collecting centre on desires to 'optimise' data, as individuals work to overcome lifeedge creation (Ruckenstein and Pantzar 2015). 'Self-hacking' is a key sonal knowledge (Suel 2013; Choe et al. 2014). The data produced are the activities that may have happened and possibly those that need to they amend behaviours because of their data. Incentives to hack often term here and refers to how users analyse their own data, as well as how informative not least because they often play a distinctive role in knowlusers, particularly as a form of motivation or offering insights into per-There is little doubt QS data provide many beneficial outcomes for

quence. Selective issues concerning QS data have been considered; for us, it is the ownership and privacy of this information that is of conseone considers the sensitive nature of some QS data (Gold 2015). For Privacy remains lightly analysed in the literature, especially when

> of QS produced data (Swan 2012; Gurrin et al. 2014). However, as we participate in QS. argue there are ambivalences in the evaluations of privacy for those who Where much of the work is strong is in the control, ownership and use tionals (Tene and Polonetsky 2013; Bland 2014; Newman et al. 2014). 2014). Others emphasise how users can take control of their own data getting permissions of those whose data have been captured (Ye et al. to data (Fotopoulou 2014), how users can analyse data (Lukas 2014), example, there has been some analysis on difficulties in gaining access (Haddadi et al. 2013) or highlight the farming of data by large multinathe security and risks inherent in QS data (Barcena et al. 2014) and

## WATCHING VIDEOS AND TALKING TO USERS

vary widely, from the more frivolous (tracking the number of push-ups a standard practice, one replicated in QS meet-ups across Europe and be attempting to achieve. ages in delivering personalised and bespoke readings of what users may QS meet-ups, to some degree, rally against baselines or presumed averthe lack of clarity provided by off-the-shelf forms of measuring, and the relation to a cancer diagnosis). A keen function of the discussion is often person achieved in a year) to the medical (monitoring bodily function in did you do?; (2) how did you do it?; and (3) what did you learn? Talks North America, for example, members speak to three questions: (1) what riences of collecting and using data. The format of the talks follows a During the meet-ups, members present 10-minute talks on their expefor users to share QS experiences (Butterfield 2012; Choe et al. 2014). the London QS meet-ups. QS meet-ups provide monthly opportunities semi-structured interviews: five high-frequency users were recruited from sented to us further privacy questions. Therefore, we conducted ten standing of those who practice QS. Findings from the videos not only of QS users. The intention of the exercise was to gain a better underchannels/londonqs), and we selected ten talks that gave a clear overview helped to identify how users understood aspects of privacy but also pre-QS Meet-up. The talks are freely available online (http://vimeo.com/ Our empirical work began with viewing recorded talks from the London

only stipulation here was that these participants had not been involved in the London meet-ups and must have been collecting their personal data In addition, five 'less' enthusiastic QS users were interviewed, the

for a period of 6 months or more. Recruitment of this group stemmed from personal contacts (friends/colleagues/family) of research team members. The gender make-up of the high-frequency group comprised of males and the low-frequency group comprised of three females and two males. This was not selective, but rather interviews were conducted with those who responded quickest to our requests for participants. The interviews took place in coffee shops or places of convenience for participants. All of these interviews were recorded and transcribed: eight of the interviews were conducted face-to-face and used a semi-structured approach; one interview was conducted over the telephone and followed the same semi-structured format. This was then written up immediately following the interviews. The final interview was conducted over email, where the respondent answered the eight questions that had formed the basis of the semi-structured approach.

#### QS PRIVACY

Key to our conversations with participants was their motives to betterment, and we begin by offering some context as to why users participate in QS. The ethos of the 'meet-up', for instance, followed a philosophy of self-hacking where problems were solved through the 'power of numbers'. If off-the-shelf devices, apps and programs did not offer clarity or a complete data set, users then sought to expand how they could analyse their data and add to it. High-frequency users tended to use their data more proactively and were keen to promote what they had found and how it could benefit other users. As the following high-frequency user states, there are many sources and varieties of data:

so I measure weight, body fat. Blood pressure I measure on a fairly regular basis. Glucose is the thing I think I measure the most frequently, and the most interested in at the moment. I... things and renal lactose threshold, lactate threshold, VO2max, dual heart rate analysis while I'm running, although not that much anymore. I didn't find it to be hugely valuable. Fitbit, I use just activity measurements. I was a really early adopter of that. Did that ... quite liked it for quite a long time then I feel off it and I'm thinking about getting back. I have one on right now. (High frequency user, male, 41–50, HU1)

For this user, QS allows and encourages an array of opportunities to improve on fitness and bodily functions. Pressing here is an experimental sense of trying new technological developments to enhance data collection (Suel 2013). However, as the user hints, this may often be short-lived, due to the lack of value in the data or possibly in a drive to experiment with ever-newer devices. Whereas, for low-frequency users, they, more often than not, use the template provided by device manufacturers, for instance, using the Jawbone platform to review the miles they have cycled. However, low-frequency users were not averse to comparing data sets to establish patterns in their data. The following participant states:

At first it was enough to simply record the info, that made me make better decisions, what gets measured gets managed. Then I started correlating certain elements e.g. I was trying to save money so kept a record of every penny I spent. At the same time I was also logging my food and mood. I realised that when I thought I was just having the odd cup or two a day, I was having up to 4 cups a day and I was buying them for whoever was with me too and I was often (about 50% of the time) buying a cake with it too. So, it was far more expensive and unhealthy that I had presumed. But the real clincher was that because I was recording my mood too, I was able to correlate my mood and I realised that all this coffee was clearly tying-in with feelings of anxiety. All that caffeine was making me feel shit! So I gave up coffee as a result. That was actually my first proper period of QS'ing and was what fired me on to do more. (Low frequency user, male, 41–50, LU5)

The participant draws their own conclusion by effectively combining two sources of information and realising that these are causing anxiety and making him feel poorly. Again, it is an experimental approach, and without the data, formal connections may not be recognised. The term 'what gets measured gets managed' may also be useful, because it is only through the collection, visualisation and comparability of data that associations are established. However, considerations of who has access to these data, for the same user, are regarded positively. The user suggests there are altruistic motives to sharing their data:

My data is private. But there's nothing compromising in it either. It's not something I worry too much about. I personally believe that if the world was more open it would be a better place. (Low frequency user, male, 41–50, LU5)

Perhaps there is a contradiction in data being private and shared. The user suggests their personal data could make a contribution to large or national databases and help formulate national standards of, for example, the average weight and activity of a UK 50-year-old man living in London. The user did elaborate that he did not remember ever signing up for his data to be used in relation to Big Data, population data or in a more open way. Yet, an assumption remained that the data would be used in this way.

In other instances, QS data are visibly displayed and mapped, for example, highlighting running routes in a specific area (Map My Run 2016). Users' recordings of distance covered, time taken and location are shared publicly. The following participant expresses her appreciation of the GPS function on Fitbit:

Well, with Fitbit the location can be on and I keep the workout public. I think there are real advantages to being public. (Low Frequency user, female, 31–40, LU2)

In this instance, the user is content because advantages initiated by her public display include an indicator to friends of her fitness performance. The participant also expressed how her runs were linked to GPS and her friends could view the 'cool' places she was running—as her job often took her to various countries. Equally, she liked to see what her friends were doing on their runs, as they also provided through a manufacture website their GPS movements. Nevertheless, evident in the following quote are expressions of irritation particularly if data are compromised or misused:

I don't mind people seeing my data. There's actually nothing in there that would particularly personally identify me. What would annoy me is if somebody [companies] took that data and did something with it .... That would piss me off, yes, because they're already making money out of me. If I haven't agreed to them selling that data on and making more money out of it, they shouldn't be doing. (High frequency user, male, 41–50, HU3)

As those we spoke to suggest, the underlying predisposition for users is that there is little to be compromised in sharing the data. For most, the data are of little value other than the support they relay in terms of

what they were designed to do—i.e. measure the distance of a run or mood when drinking coffee. For these users, sharing data presents a clear benefit, be it learning about themselves from their data or exchanging data for the 'good' of others and themselves. The following participant elaborates:

I share everything. I don't care. I am happy, like Google takes everything from me. It has got all my geo tagging and everything, because I think that is actually going to benefit me. So I can then go back and look at things and know exactly where I've been. I might look at a Google map and it will show you everywhere you've been.... But by having all that data I figure it serves you better but I don't have problems telling people where I am... (Low frequency user, female, 21–30, LU1)

The participant draws on her data as a work tool, the data provide a historical record that can be accessed with relative ease, in this case highlighting the cafes and restaurants, this food blogger has visited (Crete-Nishihata et al. 2012; Bellodi et al. 2012). What privacy and sharing serve to highlight are some of the values placed on QS data. On the one hand, the value of the data is clear in providing memory databanks or triggers to remember events. However, if manufacturers 'make money' from user data without explicitly stating the fact, then this may be contentious. Again, users suggest this is sanctioned through a belief that amalgamated data houses potential for betterment, and that organisations will protect the privacy of users:

The way I think about it is that your personal data is much more valuable when it can be compared to population data, and if I can contribute in some way to making that population data better, which is what I'm doing ... they [QS manufacturers] may be monetizing it in other ways ... They've got a business to run and I think that they will make their best efforts to make it anonymous. (High frequency user, male, 41–50, HU1)

Solove's (2007) sentiments of 'I don't care' or 'it won't happen to me' flavour users' comprehensions of digital privacy, and as we have seen, if users get to record their activities and QS companies use the data in anonymised ways or for the greater good, then it all appears to be acceptable.

### Conclusion: Managing QS Data

access to medical care for individuals or to limit the choices available to it', which may suggest privacy is valued and understood. But QS data our and often expressed in terms of 'there's nothing compromising in abouts in a murder case (Scott 2015) or undermine claims of assault 2014). Equally, what if, QS data were used to verify a person's whereusers, as it has been for some employees in US organisations (Newman few difficulties. Nevertheless, what if, QS data were used to determine because of their low sensitive or restricted compromising potentials pose lised. The information for the most part is viewed with a casual demeanis an ambiguity as to how personal information is managed and utidata. Despite the core motivations of users for self-improvement, there allowing the manufacturers of the devices the power to extract and use include posting results on social media, giving medical staff your data or trusted organisations and the owner of the data. Sharing QS data can Sensitivities often focus on the control and maintenance of QS data by expectations and, as we have seen, would 'piss off' some participants. it was collected (Solove 2006). All of which can produce a betrayal of when information is used for a purpose different to that from which mised, for example, 'information processing' and 'secondary use' of data, share information online (Leon et al. 2013). Instantly sharing and comare part of the attraction of using digital devices (Bauman et al. 2014). and enjoyment, or the ease of showing off run times and places to eat, medical monitoring or solving problems (Schüll 2016). In addition, fun to support and encourage physical behaviours, disciplining attitudes, nating information, there are a number of ways privacy can be compropractices within online environs (Boyd 2014). However, when dissemimunicating QS scores, achievements or events have become normative (Gutteridge 2015). What then? Within a Euro-Western context, there is a growing predisposition to The overarching theme in QS is improvement as well as having evidence

lating the activities of users. Beyond its immediate use, it would appear facilitators in meeting the original goals and aspirations of users—i.e. col mance. There is also a clear indication that QS devices and QS data are tive when highlighting, for example, health trends or competitive perfor-QS data hold little value; how manufacturers or even law enforcement particularly in relation to how large anonymised data sets can be produc As we have found, the advantages of openness have been expressed

> stood and valued. Clearly, there is an awareness of privacy, but much like to fear' continues. turers and third parties. The premise of 'I have nothing to hide, nothing Solove's observations, users are content to provide data to QS manufacences of the QS users, in this chapter, highlight how privacy is under-(Scott 2015) use QS data is not a privacy concern for users. The experi-

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#### CHAPTER 9

### Communal Self-Tracking: Data Philanthropy, Solidarity and Privacy

#### Btihaj Ajana

Abstract The 'self' is often an overemphasised part of self-tracking culture. However, self-tracking is not restricted to individualised forms, but is increasingly becoming a socialised phenomenon, whereby users are incited to share with others information about their physical activities and biodata via social media and dedicated platforms. This chapter builds on previous sections, looking at the 'communal' aspect of self-tracking while questioning the 'solidaristic' dimension of data sharing. It considers this communal aspect as a form of digital biosociality and links the discussion to debates on 'data philanthropy'. In doing so, this chapter explores some of the ideological functions of data donation and its philanthropic discourses, highlighting the emerging tensions between data ownership, data sharing and privacy issues in the context of self-tracking practices and data.

**Keywords** Self-tracking · Quantified Self · Data philanthropy Data sharing · Solidarity · Privacy

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