# Book review

**Quantified Lives and Vital Data**

It is refreshing that a book so interested in the quantified self is instead, in practice, deeply invested in understanding the quantified in qualitative terms. This book of essays, edited by Rebecca Lynch and Conor Farrington, takes a broadly sociocultural approach in understanding the increasing intertwining of technology and health, with a particular reference to the personal medical device (PMD). Although the book treads a path well-trodden at this point – the idea that, despite notions of "quantified self" and "self-tracking", data are rarely personal and instead constitutive of a self in action and interaction with others – the essays within allow several fascinating and extremely rich lenses of analysis on technologies (digital or analogue) and the roles they play in our own personal health.

The introductory chapter by Editors Lynch and Farrington promises higher-level themes of technologies as constituting and disrupting bodily boundaries, as problematized by Cartesian dualism, as sociotechnical machines which engender both surveillance and trust, and which guard access to important information – ultimately bestowing power on those who can utilize them most effectively (or most underhandedly – more on this later). This opening is followed by a useful chapter by Steve Matthewman, who helps define the remit of what is meant by technology or PMD for the rest of the book (the authors take a broad remit, from apps to pumps to keepsake ultrasounds), but even more crucially echoes McLuhan in asking what technologies might intensify, displace, and recapture when it comes to how they are being used in the context of our own health.

As expected, many of the chapters draw on the concept of self in order to understand, through various lenses, how PMDs extend the self (Chapter 4) or help us to understand the self in particular moments (Chapter 5). In Chapter 4, Ava Hess uses the analogy of the cyborg, along with excerpts from data collection, to explore how insulin pumps become a marker and a mediator between body and non-body, and between self and others, making itself and presence of diabetes "in/visible" – this chapter is very rich and uses only a few key concepts to state its point effectively. Slightly more theoretical is Chapter 5, where Farzana Dudhwala uses Karen Barad's notion of agential realism in order to understand how participants use smart technologies to quantify aspects of their own health and wellbeing, e.g., smart watches, calorie-counting apps. Dudhwala's theoretical work is exciting, and the notion of agential cutting, with a little more contextualization, could become a very rich concept in design for PMDs in the future.

Two of the most fascinating chapters, 7 and 8, are unafraid to mire themselves in ethical quandaries, and are all the better for it; Chapter 7, by Anna Smajdor and Andrea Stokl, contemplates the ethics of keepsake ultrasounds – that is, ultrasounds for no medical reason, rather being captured for sentiment, while Chapter 8 considers the riskiness of e-cigarettes as a medical device. Both are concerned with what is medical and what is non-medical; Chapter 8, by Editor Lynch, considers morality as well. Both chapters engage in satisfying ways with the politics of PMD provision and validation by "experts" – highlighting just how much PMDs have moved out of the hands of clinical staff, and therefore out of control – a point echoed again by both editors in the final wrap-up.

Some chapters feel a little out of date or at least not engaged with other, more practical fields – Farrington's use of Weick's theory of sensemaking in understanding technologies for diabetes is a welcome approach in Chapter 6, but needlessly (I feel) dings human–computer interaction's use of sensemaking as cognitivist, citing only older examples of the same when some of the most rich and qualitative frameworks operating today in the field borrow from Weick

(e.g. experience-centred design). Missing too is the sense of urgency which the Cambridge Analytica/Facebook scandal, as well as the operationalization of GDPR, has brought to the fore in many tech debates. This is part and parcel of the lags and lapses of publishing, and perhaps a future edition may bring this debate to the fore in ever more exciting ways. Moreover, I was disappointed at times at how very rich observations were surfaced and then dropped; supervising, as I do several computer science students, I wondered how they may make best use of these observations. It may be too on-the-nose to ask for an "implications" chapter, but I missed this future-facing orientation, and believe the book has a particularly exciting one to offer.

Minor complaints aside, this book is an important one, forwarding perspectives that should be read by those currently the building and making available the sorts of systems and artefacts problematized within. We are seeing the commodification and reduction of our data everyday – it is particularly worrying when aspects such as our own health and wellbeing are prey to this as well; even worse when complex concepts such as fertility, community, and self are threatened as well. The editors are, I think, correct, when they criticize in the opening pages the notion that we are living in either a tech utopia or dystopia – however, it is the shades of grey which should concern us, and which this book highlights very well.

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## Digital Health: Critical and Cross-Disciplinary Perspectives

Increasing proliferation of fitness trackers and health management apps into daily use has led to an increased public awareness of the "Digital Health" movement. Through Digital Health, Lupton focusses on the current scholarly work on digital health technologies, and the impact of digital technology and digitisation of information and health records on citizen, governments, and healthcare systems. This volume focusses on a number of key issues from the key theoretical concepts behind digital health understanding, big data, health apps, self-monitoring wearable devices, and the impact of the digital health movement on medical and health work, providing key background information on each and making clear the links between topics.

The introduction of the volume sets out a clear pathway for the rest of the book, setting the topic of digital health within the context of technological and information advances through the different stages of the World Wide Web, and the emergence of "big data" as massive data sets which can be used to try and understand the routine activities of technology users. Lupton also charts the changes from early health-related websites, to cross-platform apps and devices which continue to be used in novel and unprecedented ways, leading to some questions about the ethics of recording this data, and the security with which it is shared. This chapter closes out with a succinct chapter by chapter overview of the rest of the volume which is a helpful tool for the reader to understand the argument of the author at a glance.

Chapter 1 covers the theoretical background behind the Digital Health movement, spanning from the socio-material focus on embodiment and digital interactions, to the distributions of power from a political economic approach which debates whether power in medical decisions lies with the individual who is generating the data, medics who are interpreting it, or companies whose apps or wearables are collecting and commercialising data. Themes of phenomenology and embodiment are also presented as easy to understand sections.