Are you (self-)tracking? Risks, norms and optimisation in self-quantifying practices

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ABSTRACT: In this paper, we reflect on self-tracking practices in the context of neoliberal ideologies – predominantly the quest for self-improvement as mediated by and affecting the individual. On the backdrop of Foucault's concept of governmentality and current academic research on the Quantified Self, we consider online accounts and reflections of people's self-tracking endeavours as they emerge from and exist in neoliberal frameworks. We will outline how they relate to and produce ideas of humanity as inherently risky, the construction of 'normality' based on individual parameters, as well as optimisation as a never ending imperative where new opportunities for improvement are paramount. Finally, we present and suggest ways of *queering* self-tracking in order to subvert and reconceptualise its practice in order to imagine and enable the emergence of different utopias.

KEYWORDS: governmentality, risk, neoliberalism, queer, self-tracking, quantified self

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'I've gone to some great extremes in search of sexual satisfaction', says Miles Klee in an article for *The Kernel* (2015), prefacing an account of his light-hearted experiments using self-tracking apps to gather data about his sexual activities. After all, he states, '[h]ow could I improve my sex life without first assessing how I normally bang?' Klee downloaded three different apps onto his smartphone – *Intima*, *Love Tracker*, and *Track My Sex Life* – and proceeded to log each instance of sexual activity with his wife over the next two weeks. Among the variables he tracked were the duration of each sexual encounter, the kinds of activities performed, their loca-

tion, and their levels of satisfaction. Reporting on his experiences, Klee illustrates the kind of self-tracking that we are interested in in this paper: recording (mostly quantitative) data about aspects of one's self (or selves) with the aid of digital technologies.

Within self-tracking practices, numbers play a pivotal role as primary means of producing and articulating facts, lending them authority through quantification in a way that makes them appear 'objective', 'true', and 'trustworthy'. This is illustrated by the motto of the Quantified Self movement: 'self-knowledge through numbers' (Quantified Self, 2015). Klee happily reports that over the course of his tracked sexual encounters, his wife (who was tasked with this job) never rated their sex lower than five out of five possible stars (or other icons). But quantifying one's sex life, it seems, is not without its hurdles. *Love Tracker*, for example, has a built-in timer that must be switched on at the beginning of each sexual encounter. Klee recounts his troubles with this function:

> […] was I meant to flick it on as soon as I lunged toward my wifes side of the couch and, by extension, reached second base? Or should I start it when, after 20 seconds of making out, she realized that I wasn't going to leave her alone until she shut me down or acquiesced to my clumsy advances?

Besides having to grapple with the ontological question of what constitutes sex and its starting point in order to adequately track it, Klee recounts a pressure to perform building up as a consequence of his tracking: he developed a desire 'to impress the apps' by reaching better results – for example, by hoping to log as many sexually active minutes as possible. Paradoxically, Klee also notes that two of the three apps he used would not have allowed him to input a duration of longer than 23 minutes, setting a rather arbitrary upper limit that nevertheless provides a point of orientation when (re-)viewing data.

At the basis of many self-tracking efforts lies the idea that the data can be harnessed to discover ways of improving one's life in some respect. Accounts surrounding self-tracking tend to focus on narratives of change and transformation towards a better now, and an even better future. Klee's experiment with sex-tracking itself is linked to its potential for improving the quality of his sex life – even though it quickly becomes clear that he is actually quite satisfied with the status quo.

Accounts like Klee's are what sparked our interest in thinking about self-tracking in terms of risk-taking and risk awareness, social and individualised norms, and the impetus of optimisation. Proceeding from this initial interest, this article constitutes not a rigid study of a fixed data set, but a collection of ideas and provocations of thought that developed out of our own immersion in and reflections on self-tracking discourses. In the process of this immersion and reflection, we considered first- and second-hand accounts, reviews, presentations, and other narratives online (e.g. on blogs, in forums) as well as academic publications, all linked to what has become known as the Quantified Self movement.

On the basis of these observations as well as our own personal experiences with self-tracking, we trace some of the ways in which different kinds of risks are construed and constructed in the course of self-tracking enterprises and examine how these ways tie into normative social structures and existing systems of power that guide the scopes of action and being that people see as un-/acceptable and im-/possible for themselves and others. In doing so, we seek to point out self-tracking practices as a site where the distributed functioning of power (referred to by Foucault (1991) as governmentality) can become particularly visible. In order to do so, we will engage with three kinds of risks produced in quantifying the self: firstly, the assumed fundamental fallibility of humanity; secondly, the production of individualised norms; and thirdly, the drive towards being as excellent as possible by finding new risks (i.e. opportunities) to improve upon. We will trace how governmentality plays out in self-tracking, and think about *queer* ways of understanding and doing self-tracking as a means of engaging with the quest for ever-increasing excellence.

Tracking Self-Tracking

But what is self-tracking, anyways? At the most general level, we could call any activity with the aim of monitoring various aspects of one's life *self-tracking*. This might include notebooks as well as simply keeping track of certain parameters in one's mind. Such practices have a long history going back to at least ancient Rome and Greece (cf. Foucault 1990, 2002a, 2002b). More recently, in a study conducted by the Dew Research Center in 2012, Fox and Duggan (2013) found that a significant portion of the US population engaged in some kind of self-tracking, a fifth of

whom used some form of digital technology in their practices. Considering the enormous number of tracking apps in smartphone app stores as well as the flourishing of dedicated tracking devices, it seems likely that this proportion has risen further since 2012. Indeed, for the purpose of this paper, we are going to focus on self-tracking that involves the use of digital devices for keeping track of one's bodily parameters.

This form of self-tracking, particularly practices that focus on bodily and health issues, can be seen as part of what Nettleton (2004) called 'e-scaped medicine' as medicine is increasingly moved to the realm of the Internet and the authority of traditional medical experts is challenged. As such, self-tracking constitutes a part of the increasing digitalisation of human bodies (O'Riordan 2011) as well as backs the trend of 'prosumption' that has come with the advent of the web 2.0 (Davis 2012). Prosumption, here, refers to a blurring of lines between production and consumption as web 2.0 users don't simply consume web content, but actively contribute to its production. A similar point holds true for self-tracking as self-trackers don't just consume apps, information, etc., but contribute their own data.

Even though self-tracking sounds, by name, like an isolated enterprise, there is a culture of self-trackers, the *Quantified Self*, founded by *Wired* editors Gary Wolf and Kevin Kelly in 2008. While this group represents neither all self-tracking activities nor all the people who engage in them, it functions as a galvanising agent for more 'serious' self-trackers by offering a centralised forum. Face-to-face events like the annual Quantified Self conference as well as more regular meetings by local groups exist, and to a large extent consist of 'show and tell' presentations in which self-trackers narrate their experiences with self-tracking (Watson 2013). While the term self-tracking is strongly associated with that of the *quantified self and while numbers as well as their assumed objectivity play a central role in many self-tracking practices*, self-tracking is also linked to interpreting data and embedding it in narratives, producing a *qualified self* (Jones 2013; Boam and Webb 2014; Davis 2013; Lupton in press).

But what do self-trackers actually track? In their 2012 study, Fox and Duggan found that the most popular tracked aspects were exercise, diet, and weight. This fact already points to the entanglement between self-tracking and societal norms and ambitions such as health and beauty ideals. However, there is a far wider variety of properties that can be tracked, among them, for example, sleep patterns,

blood sugar levels, geolocation, or mood. Beyond the body, self-tracking may also involve tracing more abstract stats like one's purchases or finances. The Quantified Self website lists over 500 different self-tracking 'tools', from wearable pedometers to smartphone apps (Quantified Self 2015). There is also a wide variety in tracking practices: while some trackers may only track one or two aspects of their lives for limited periods, others track manifold data points over long timespans (Lupton 2014a).

Although self-tracking in the ways outlined above is a relatively recent phenomenon, it has received a degree of attention in not only popular, but also academic circles. For example, self-tracking has been enthusiastically argued to be a valuable tool for health promotion and improvement, e.g. through tele-care (see for example Swan, 2012a, 2012b) and is estimated to reach 50 billion in 2020. A wide-ranging Internet of Things (IOT). Others have been more critical of such perspectives, suggesting that it ties into current neoliberal orderings of society[1] that emphasise the individual's responsibility for their own health and 'patient consumerism' (Lupton 2013b) while understating the importance of sociocultural context and furthering a culture of pervasive surveillance (Lupton 2013b; Lupton 2014b; Lupton 2012). Additionally, such enthusiasm may leave issues such as potential conflicts of interest within the healthcare industry unexamined (Krieger 2013). Finally, some analyses explicitly emphasise the capacity of self-tracking to influence societal and individual norms, for example about sexuality (Lupton 2014c) or in accordance with the neoliberal ideal of the self-responsible 'entrepreneurial subject' (Lupton 2013a). On the other hand, Nafus and Sherman (2014) have argued that self-tracking practices can involve a form of 'soft resistance' insofar as commercial and governmental interests in compiling large datasets are foiled as users move between different roles and switch between collecting different kinds of data, thereby resisting traditionally authoritative 'clean' data collection practices.

Our immersive, exploratory research was conducted in co-operation with Ágnes Fülöp and is based on several dozen individual accounts that self-trackers offer on the internet. We found these accounts primarily through a) the Quantified Self website, b) links between different accounts, and c) web searches for keywords such as 'Quantified Self'. In this paper, we want to selectively zoom in on how the notion of 'risks' can operate in self-tracking endeavours.[2] In our current worlds, risks are among the cogs that keep the machinery of self-optimisation and

self-government running. They form part of what Foucault (1991) called govern-mentality: the distributed functioning of power through society. Governmentality, in this sense, is a 'soft' and subtle form of power:

> it is a question not of imposing law on men, but of disposing things: that is to say, of employing tactics rather than laws, and even of using laws themselves as tactics – to arrange things in such a way that, through a certain number of means, such and such ends may be achieved. (Foucault 1991, 95)

Risks feature in this scheme insofar as they are one of the strings that tie expect-ed behaviours and individuals' self-governing activities together (Lupton 1999b). Risks, then, are not merely elusive monsters that lurk out there in the dark and that we should seek to drag into the light. Much rather, they are constituted in and through social norms (Fox 1999). Based on a feminist materialist perspective that takes into account how discourses and the 'material' world are entangled, we want to suggest that risks are born from intra-actions[3] between a range of material-discursive factors (and we are going to examine who bears these risks in this paper). This means that risks cannot be relegated to the realm of a supposed objective material reality that is 'out there' and only needs to be dis-covered, but neither are they simply figments of social construction(ism). In any case, they are firmly entangled with societal ideologies and take part in shaping both these and users' ambitions as well as the utopias they/we strive for.

In what we are going to present below, we have little doubt that we are wrong, and that our 'description' can never be complete – not only because we are situ-ated in the world and therefore cannot claim to see from nowhere, everywhere or even just anywhere (Haraway 1991), but also because any description of the world influences that very world: looking is touching. However, we are not alone in believing that a complete account of the world is not only unachievable, but also undesirable seeing as exclusions (and resulting new arrangements of reality) may also open up space from which alternative ideas can grow.

What we therefore seek to offer is not a description of 'the world' as 'it is', but much rather a partial and conversational account: an account that is brought for-ward through manifold conversations with the objects/subjects that we look at and that look back at us, with authors and books, with our own lives, practices and

experiences, and, finally, with you, our readers. After all, it is not without reason that Granny Weatherwax, a character in one of Terry Prachett's Discworld novels, says that reading books is like necromancy because we re-awaken the spirits of people and times long passed. Still, the notion of a spirit should not lead us to wrongly assume that these spirits are faithful to someone or anyone. Much rather, these spirits also only exist in their 'intra-action' with the contexts in which they re-emerge, and we – their readers – are parts of these contexts. We therefore want to invite you to bring in your own experiences with tracking, knowing, improving, and producing your selves as you read this paper in order to re-awaken our respective spirits in an intra-active conversation about the *values* that matter.

Risky Humanity

Risks tie into self-tracking practices through the pervasive implications (or, at times, explicit assumptions) that humans are fundamentally deficient. Moschel (2013) asks poignantly: '[w]hy are we fat? What makes us feel sluggish? What causes our disease? How can I improve?' The implication is clear: human life is risky; it is prone to dysfunction and seldom fully conforms to the myriad standards we hold it to – be those standards of physical health and fitness, mental constitution, emotional wellbeing, outward appearance, or others. It appears that *something* needs to be kept in check in order to control or pre-empt the fallout of being human, and the Quantified Self strategy to wrestling for this control is surveillance via self-tracking.

There is a range of human deficiencies that can be fairly easily pinpointed in their need to be mended or improved upon, for example in narratives on weight-loss. However, the very first issue (both chronologically and metaphysically) that humans have to contend with to even be able to tackle other risks is their fundamental irrationality. Humans are seen as beings that *mis*interpret the world around (and inside) them according to received assumptions and emotions: since they cannot even see their own faults, they cannot effectively pursue betterment. As Moschel (2013), in a 'Beginner's Guide to Quantified Self', writes,

> [e]very day we blindly make decisions we hope lead to improvement. To make
> matters worse, we judge success based on imperfect and biased feelings. If our
> world is dark, it seems we are also covering our eyes.

There seems to be something 'wrong' with the person who engages in self-tracking: they seem to be at risk from their own untrustworthiness when it comes to perceiving and producing 'hard facts' and understanding themselves – there is a *meta risk* to being human. Beato (2012), casting this issue in the light of the human trait of forgetfulness, states that

> [f]orgetting is the highest form of forgiving, and our inability to pinpoint exactly how we deploy our energies and resources allows us to live comfortably in the face of our own mediocrity.

Here is where the powerful role of technology becomes most apparent: digital devices and applications (from specialised, dedicated self-tracking apps to 'generic' social media) don't let us forget anymore, as long as we make the effort to log the relevant data. This is in line with what Zandbergen (2013) calls the Quantified Self community's propensity for 'radical acts of self-disclosure'; our digitally enhanced memory capacity reminds us both of our successes and failures, and does not let us forget anymore; it partially outsources a risky aspect of humanity (memory) and thereby confronts us directly with the inescapable realities of our lives (one of which may be that we're just … mediocre). In this light, self-tracking is not merely a numbers game, but creating a culture of self-confession based on overcoming the hurdles our own brains place on our track. As Beato (2012) articulates, 'intellectual perceptions, which can be readily influenced by external forces' are what self-tracking practices promise to go beyond in order to produce *truer* truths – truths that help us see ourselves clearly, unencumbered by the incomplete and biased ideas and memories we hold about ourselves.

The way to produce the *truest* truth is through a form of *scientisation* of the self with the help of digital devices in self-tracking, based on valuing measures that provide reliable means of attaining self-control – like the supposed neutrality and credibility of numbers. In this sense, self-tracking can be seen as an example of what Foucault (2002b) describes as the production of links between the subject and truth, where truth regimes (i.e. ways of distinguishing between truth and non-truth) play an important role in the subjectification of the self. Indeed, ideas in the Quantified Self movement can be linked to the argument brought forward by Nick Fox that '[m]odernism […] is a project of mastery which begins with a process of

definition and then – through reason and via the application of technology – controls and changes a phenomenon' (Fox 1999, 23). The very ambition to control (for) human deficiency and inefficiency lies at the heart of certain self-tracking enterprises.

According to Foucault, governmentality functions through three modes of objectification: science, dividing practices, and turning oneself into a subject (Foucault 2002c). In the Quantified Self movement, these three modes of objectification are brought into alignment with each other: self-trackers divide themselves into multiple aspects that can be transformed into data, and these data are seen as the rational and neutral expression of a kind of scientific truth. In these readings, the self is disclosed as manageable, thereby steering human self-trackers onto a road where self-control and improvement (i.e. overcoming one's flawed humanity) becomes a tangible and achievable goal. Self-tracking constitutes a strategy to deal with the looming risk of human inadequacy.

Transcending normality

This risk – perceived failings that need to be eradicated, or faults that need to be improved upon – is predicated upon the process that an individual person turns themselves into a marked, recognisable subject of their own gaze. Foucault (2002c) upholds that

> [t]here are two meanings of the word "subject": subject to someone else by control and dependence, and tied to his [sic] own identity by a conscience or self-knowledge. Both meanings suggest a form of power that subjugates and makes subject to.

This form of power can be traced in the roles that norms play in self-tracking practices. People actively seek out norms and make them their own, self-police and self-regulate in order to adhere to them (Lupton 1999a, 61). What makes engaging with norms in self-tracking practices particular is that wider scientific and societal standards are sometimes construed as hindering efforts at self-improvement. Coming back to the idea of human fallibility and untrustworthiness, one could even argue that norms play a part in humanity's inherent riskiness due to their

pervasiveness in shaping people's preconceptions. In that sense, norms can be seen as *skewing* perspectives on the realities of an *individual's* life.

Many self-trackers seem to take set standards – such as, for example, conveyed by governments or experts (e.g. medical professionals) – not as ultimate, but as guidelines that inform, but do not govern the decisions that result from their interpretation of their individual data. They follow Wolf's (2010) argument that '[s]ome of us aren't standard […]; perhaps many of us aren't.'

Shining through this argument is the entrepreneurial individualism that lies at the heart of Quantified Self practices: the desire to take charge of one's own life on the basis of the most accurate information possible – information not simply obtained through statistical aggregates of large populations, but by monitoring the Self that really matters, i.e. by *becoming an expert on and of oneself*. Ian Clements (2013), for example, consistently self-monitors around 250 biomarkers to predict his health and to find the best measures to enhance his long-term survival with cancer. To Clements, his own body and lifestyle as well as the data he has compiled about them hold the answers to improving his health situation – to the extent that he calls it '[t]he missing dimension of Cancer Survivorship'. By blurring the lines between lay and expert knowledges, Clements' self-tracking empowers him as a patient as well as a person with cancer. While he has no intention of foregoing professional medical care, he nevertheless exercises agency by actively producing data and trying to interpret it, i.e. by doing work that is usually left in the hands of 'experts'.

A common understanding of the functioning of risks in governmentality is that '[c]ontemporary knowledges and discourses on risk emerge from both expert and lay sites, but it is the experts who hold most sway because of the assumed "scientific" and "neutral" character of their knowledges' (Lupton 1999a, 63). However, what seems to be happening in the Quantified Self is that self-trackers refuse received expert knowledges and become experts on and of themselves by producing what they see as 'scientific' and 'neutral' knowledges through numbers (see also Nafus and Sherman 2014). Again, *scientisation* plays a major role in legitimising self-trackers' attempts at producing alternative knowledges on and of themselves and the risks they face. It seems that rather than simply tackling risks by comparing oneself to what should be 'normal', being subjected to norms can itself constitute a risk to avoid or circumvent.

However, it should be noted that while particular standards are challenged and often subverted in the Quantified Self, this does not mean that self-trackers can rid themselves of norms completely. Frequently, more pervasive norms about what the world in general looks like (and therefore *should* look like) are not questioned and built into self-tracking devices from the outset. Fitness apps, for example, often boast software that factors in a user's age, gender, or weight in order to produce 'more accurate' data. These apps presume a universal alignment of gender identity with a particular body type, metabolism, etc. However, not only can this perceived alignment be problematic for many (such as intersex as well as trans*- or gender-variant-identifying people), it also obfuscates the heterogeneity of physical and functional characteristics among persons who share bodies of the 'same sex'.

Similarly, the overarching ideals – or utopias – of the Quantified Self movement – self-optimisation and efficiency enacted by entrepreneurial subjects – appear to be rarely questioned in their validity as goals to be strived for, and the ultimate aims of self-tracking efforts are left largely unchallenged. For example, self-trackers might be critical of specific strategies of becoming smarter – e.g. pedagogical practices that don't pay attention to 'experimentally proven' knowledge about memory retention –, but unquestioningly accept that better memory is a goal that is worth pursuing.

Likewise, any issues that come up in the practice of self-tracking are usually located back in the individual, while leaving little room for taking larger social structures or contexts as possible influences. Therefore, while self-trackers, in their quest for optimisation and risk aversion, may not listen to experts when it comes to the specific pieces of data that they track, they nonetheless often buy into broader cultural frameworks, from ideas about gender differences in fitness activities to the overarching theme of efficiency and self-optimisation. The ideology of questioning norms does not extend to all norms.

Be the best you can be

We have seen that frequently, the goal of self-tracking is individual fulfilment or reaching 'an ideal version of myself', as Nell Watson (Daalder and Watson 2013) phrases this in regards to her weight-loss aims. Optimisation is key in a neoliberal

risk enterprise that is not content with mediocrity. Within self-tracking, statistics and their numbers are not used in relation to large populations, but in order to establish *individual norms* – norms to which specific neoliberal actors can and should adhere in order to maximise their potential and therefore minimise their risk of 'not being excellent enough'.

This particular drive towards constant improvement leads us to the final facet of the Quantified Self movement that we want to address here: the search for new risks that are 'hidden in the numbers'. While self-trackers may collect data in order to tackle problems and risks that are already known, they frequently also look for opportunities for optimisation that were previously unknown and are yet to be uncovered. As Wolf (2010) states,

> [a]lthough [self-trackers] may take up tracking with a specific question in mind, they continue because they believe their numbers hold secrets that they can't afford to ignore, including answers to questions they have not yet thought to ask.

Risks, therefore, are not only about dangers that we face already, they are also about those that could come to haunt us in the future – and they provide opportunities. This can be illustrated, for example, by the self-tracker who 'had started by looking for a cure for insomnia and discovered a way to fine-tune her brain' (ibid.).

Coupled with the overarching trope of human deficiency, understanding risks as opportunities holds its own challenges. After all, there is always the danger that '[y]ou may simply have failed to notice a debilitating habit, a negative correlation, a bad influence' (Wolf 2010), leading to a missed opportunity – to not living up to your full potential. Numbers, it seems, can help us not only to function within certain working parameters to avoid risks, but also to seek out and address risks (and, through this, happen upon potential benefits) that we might not even be aware of. As we have indicated above, discovery and production are closely entangled: if risks are constructed in light of societal ideals and ideologies, then the search for new risks can never be merely a matter of discovery. Indeed, what we do or do not consider 'risky' is not a matter of what is 'out there'.

This brings us back to the starting point where humanity is intrinsically risky if not supplemented by neutral numbers and rational digital devices, and also to

the neoliberal impetus to produce not only norms to which one must adhere, but also ideals for which one can strive. The discovery of new risks is interlinked with the quest for self-optimisation: by finding heretofore unknown risks that could be avoided, the self-tracker enables themselves to further optimise oneself. Not being excellent enough constitutes a risk in itself.

In the Quantified Self movement, the boundaries between risk and self-improvement are blurred. No clear distinction is made between attempting to avert negative potentialities and attempting to avert ones that are simply not positive. Levina (2012, 153), writing about 'Health 2.0' initiatives in which self-measurement and sharing of data with others are combined, argues that '[b]y optimising risk subjectivities, Health 2.0 narratives ask us to imagine a future where we are most happy and healthy'. A similar point seems to apply to the Quantified Self movement: the notion of an optimised future self also feeds into maximising 'productivity' (including in the sense of producing insights about oneself) in the present.

Bearing risks

Risk, as it operates in the Quantified Self movement, is not simply a technology of government that is deployed by a state or specific actors within its domain. Even though risks are definitely convenient for a neoliberal state and economy, they are not a product of such a state. Instead, neoliberal ideologies – including not only striving for optimisation, but also a specific form of 'freedom' from external regulation – are embedded in the very social fabric that constitutes the Quantified Self movement, making it impossible to trace back ideological strands to particular individual sources. Self-trackers are not merely 'expected to engage in practices identified as ways of avoiding or minimizing the impact of risks to themselves' (Lupton 1999b, 101). Instead, they take an active part not only in adhering to these expectations, but in producing them in the first place – as an expression of freedom.

Self-trackers, then, are indeed 'active rather than passive subjects of governance' (Lupton 1999b, 90). However, we need to take more seriously their multiple positioning: on the one hand, they are positioned as subjects in the sense that they are subject to the rule of an external, clearly delineated entity; on the other hand, they are subjects in the sense that they are agents who actively question

certain norms (like the authority of medical experts), but might uphold others (like gender norms or the prioritising of productivity and individual responsibility). If Foucault (2002c, 341) writes that '[t]o govern … is to structure the possible field of action of others', then the Quantified Self movement shows clearly how it is also very much about structuring one's own possible field of actions – not because of more or less clearly defined medical or psychological norms or any one actor's agendas, but because of a more general ideology of self-improvement and self-optimisation that is flexible enough to enable the questioning of some norms while (and through) upholding this more general overarching theme.

Queering self-tracking

We do not wish to propose an exclusively bleak and static perspective on these matters. The Quantified Self undoubtedly contains drivers towards becoming better and better, and towards un-covering more and more risk opportunities for self-improvement as symptoms and perpetuators of neoliberal ideologies. However, self-tracking is a varied, multi-dimensional practice. While improvement or monitoring may be the central theme of many self-tracking endeavours, some practices are not exclusively geared at achieving the neoliberal utopia of being the most self-possessed, efficient and, successful individual one can be.

In this vein, we believe that attempting to *queer* self-tracking can be a worthwhile endeavour. We understand *queering* as carrying forward the legacy of anti-normative criticism by activists and academics, performed through the questioning and destabilising of social norms, including those pertaining to gender and sexuality (Browne and Nash 2010, Jagose 1997). Such criticism seeks to make it possible for new worlds – new utopias – to emerge. Specifically, we hope that there may be utopias out there in which competition and one-upmanship do not govern social systems – why be afraid of 'mediocrity' when there are no hierarchies to contend with, thereby ridding the term of its threatening quality?

In order to think about how queer/-ing self-tracking might work, it is necessary to consider that devices and practices function in intra-action with each other – there is not one without the other. As a self-tracker, one needs to engage with one's technology of choice, which in turn influences one's field of action within the particular tracking exercise. On the development side, it is therefore crucial

to interrogate the ways in which possible realities are imagined. If, for example, an app necessitates the user to tick a 'female' or 'male' box, the technology contributes to a reality in which there is only one or the other, in which this distinction has a significant bearing on the self that is being tracked, and in which there are differences that are, to some degree, uniform among the members of each group. Queering self-tracking here could act through decisions made on the part of the developers – decisions to open up rather than close down who imagined (or as-yet unimagined) users might be (van der Velden and Mörtberg 2012). This opening up would enable new worlds to emerge.

It is furthermore interesting to note that 'failing' (Halberstam 2011) at fulfilling a technology's requirements and assumptions can in itself draw attention to pervasive norms and as such constitute a queer practice – or at least a point of departure for further queer(y)ing forays. For example, the sex-tracking apps Klee used in our introductory story asked for the duration of 'sex'; this could potentially open up a space for questioning assumptions about what seems so obvious: what is 'sex', anyways? Similarly, the sex rating system could be taken as a point of departure for reflecting on why it needs to be rated in the first place. Realising that one does not fit into expected norms can act as a stimulus to start questioning and challenging norms on a wider, societal scale, and thereby queer self-tracking through one's own experience and self-reflection.

Moreover, self-tracking efforts can contribute to awareness-raising and increasing empathy for experiences that are not our own. Pedometers, for example, play a pivotal role in Jesse Shanahan's (2015) #AccessibilityMatters challenge: Shanahan encourages able-bodied people to walk in her shoes by adopting an approximation of her everyday restrictions – they have 3.000 daily steps at their disposal to go about their life and accomplish chores. In addition, there are conditions for special (but very everyday) circumstances like not getting enough sleep or standing for longer than 20 minutes, which cost additional steps.

Similarly, in order to counter the emphasis on productivity and efficiency, self-tracking could be queered by tracking data that ostensibly has 'no use', but is done as an exercise of silliness and fun, and to direct one's attention to aspects of life that lie outside neoliberal paradigms. One such example was given to us by our friend J. who takes a photo every time they encounter a yellow car. In doing so, J. ostensibly contributes nothing to their self-development; it does not, generally

speaking, 'make sense' for them to track yellow cars since there is no apparent benefit beyond an accumulation of data. The effort might be classified by many as a waste of time and energy. Still, J. enjoys tracking yellow cars 'purely for the fun of it'.

Finally, queering self-tracking can also mean embracing data outside the realm of coherency, leaving space for ambiguity and contradiction.[4] Thus, queer self-tracking could be understood as an embracing of multiple selves and their instabilities – rather than insisting on accessing hidden, unshakeable truths located within oneself through data, and fitting them like puzzle pieces into a coherent picture of oneself, such truths are never un-covered, but co-constructed in the process of looking for them. Resisting the demand for coherency and singularity can mean opening up opportunities for the emergence of unexpected, unusual, *queer* realities.

However, while there are spaces for queering self-tracking in both the technologies themselves as well as in users' practices, not everything always goes in the intra-actions between devices, users, and practices. For example, the placement of information and data on-screen implies correlations and drags our attention to something the developers deem particularly important. If a period tracking app prompts the user to indicate their mood in addition to their menstrual status using button placements, it creates a reality in which a person's menstrual cycle and mood are interlinked, and probably assumed to function in stereotypical ways.

At the same time, apps and devices are not inherently 'anti-neoliberal' as they only become meaningful in intra-actions that involve much more than just, e.g., the coded fabric of an app. The health-tracking app Google Fit allows users to select not only 'male' and 'female' as their genders, but also 'Other' and 'Decline to state', which might, as we argued above, allow new utopias to emerge by enabling realities in which gender is more than binary. However, it is unlikely that it will do so on its own, in the context of societies that are very much characterised by a male/female distinction.

Self-tracking itself is a multiple practice with facets that can be problematic, beneficial to people's well-being, and even *queer* in the ways it offers engagement with risks, norms, and the paradigm of optimisation in neoliberal social contexts. Devices, apps, users, practices, ideologies, ambitions, and utopias are but puzzle pieces that only make sense – whether in a 'useful' way or not – if put together.

This means that the worlds in which self-tracking is performed change its practice while, at the same time, self-tracking changes worlds. Self-tracking need not automatically succumb to neoliberal imperatives; indeed, instead of focusing on ways of anchoring it in discourses of improvement and optimisation, we suggest a creative recasting of focus in which self-tracking can function queerly and open up space for the unexpected.

Endnotes

[1] The basis of our understanding of neoliberalism is a focus on the autonomous individual that is fully responsible for their circumstances and actions – at the expense of affording any influence to sociocultural factors and forces: '*Homo economicus* is a free and autonomous "atom" of self-interest who is fully responsible for navigating the social realm using rational choice and cost-benefit calculation *to the express exclusion* of all other values and interests. Those who fail to thrive under such social conditions have no one and nothing to blame but themselves.' (Hamann 2009, 38, their emphasis)

[2] While we have chosen our evidence on the basis on what would be most illustrative for our individual points, we want to note here that our observations could have been backed up easily by different cases.

[3] Our usage of this term is based in Karen Barad's (2007; 1996; 2003) *agential realism*. It points to the fundamental interdependency and mutual (performative) constitution of 'objects' in the world. Rather than assuming that the world is populated by individual and independent objects, an agential realist perspective is based on the assumption that it is not individual particles (i.e., the 'atom' that cannot be divided any further), but 'phenomena' that are the basic ontological unit. A phenomenon, in this context, is the combination of various factors that lead to the emergence of 'stuff' in the first place: the relation gives rise to the relata, not the other way round. Specific objects only exist in and through such phenomena, not outside of them – this is what Barad calls intra-acting.

[4] See Law (2004) for a more extended treatment of how coherency is a core characteristic of current Western ways of seeing the world – including the ones popular in social science.

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