

BECOMING YOUR OWN DEVICE: SELF-TRACKING CHALLENGES IN THE WORK-PLACE

STEVEN RICHARDSON

DEBRA MACKINNON

Abstract. Workplaces have long sought to improve employee productivity and performance by monitoring and tracking a variety of indicators. Increasingly, these efforts target the health and wellbeing of the employee – recognizing that a healthy and active worker is a productive one. Influenced by managerial trends in personalized and participatory medicine (Swan 2012), some workplaces have begun to pilot their own programs, utilizing fitness wearables and personal analytics to reduce sedentary lifestyles. These programs typically take the form of gamified self-tracking challenges combining cooperation, competition, and fundraising to incentivize participants to get moving. While seemingly providing new arrows in the bio-political quiver – that is, tools to keep employees disciplined yet active, healthy yet profitable (Lupton 2012) – there is also a certain degree of acceptance and participation. Although participants are shaped by self-tracking technologies, “they also, in turn, shape them by their own ideas and practices” (Ruckenstein 2014: 70). In this paper, we argue that instead of viewing self-tracking challenges solely through discourses of *power* or *empowerment*, the more pressing question concerns “how our relationship to our tracking activities takes shape within a constellation of habits, cultural norms, material conditions, ideological constraints” (Van Den Eede 2015: 157). We confront these tensions through an empiric case study of self-tracking challenges for staff and faculty at two Canadian universities. By cutting through the hype, this paper uncovers how self-trackers are becoming (and not just left to) their own devices.

Keywords: Self-tracking; Corporate wellness; Health promotion; Science & technology studies; Organizational studies

Résumé. Depuis longtemps, les milieux de travail cherchent à améliorer la productivité et la performance de leurs employés en surveillant et en suivant une variété d’indicateurs. De plus en plus, ces efforts ciblent la santé et le bien-être de l’employé, reconnaissant qu’un travailleur en santé et actif est un travailleur

productif. Influencés par les tendances en gestion qui mettent l'emphase sur la médecine personnalisée et participative (Swan 2012), certains milieux de travail se sont engagés dans leurs propres programmes pilotes, utilisant des moniteurs d'activité physique portables et des analyses de données personnalisées afin de réduire le mode de vie sédentaire typique des travailleurs. Typiquement, ces programmes prennent une forme de défis d'auto-suivi ludifié en combinant la coopération, la compétition et la collecte de fonds pour inciter les participants à bouger. Bien qu'apparemment fournissant des flèches supplémentaires au carquois biopolitiques – c'est-à-dire des outils afin de garder les employés disciplinés et actifs, en santé mais profitables (Lupton 2012) – il existe aussi un certain degré de consentement et de participation. Tandis que les participants soient façonnés par des technologies d'auto-suivi, “ceux-ci les façonnent eux-mêmes par leurs propres idées et leurs propres pratiques” (Ruckenstein 2014: 70). Dans cet article, nous soutenons qu'au lieu de considérer les défis de l'auto-suivi uniquement par des discours sur le pouvoir ou l'autonomisation, la question la plus pressante concerne “comment notre relation à nos activités d'auto-suivi prend forme dans une constellation d'habitudes, de normes culturelles, de conditions matérielles, de contraintes idéologiques” (Van Den Eede 2015: 157). Nous confrontons ces tensions à travers une étude de cas empirique sur les défis d'auto-suivi pour le personnel et le corps enseignant de deux universités canadiennes. En dépassant le battage médiatique, cet article explore comment les auto-suiveurs deviennent (et pas seulement laissés à) leurs propres appareils.

Mots-clés: Auto-suivi; Bien-être d'entreprise Promotion de la santé; Études scientifiques et technologiques; Études organisationnelles

INTRODUCTION

Tracking the self in the workplace is nothing new: time punch cards, annual employment reviews, and task pace tied to numeric execution are common in many sectors of the economy. But today “the self” has transformed even more — first from something that must be made amenable to tracking, then onto something that must be tracked, and now is completely inside the tracking itself, as something that must measure and report. Armed with wearable devices and a pursuit of all things quantifiable, workers are now monitoring both the conduct and context of their work, ostensibly, for the purposes of better understanding the conditions of safety and productivity. Simultaneously however, we see a rise in the use of self-tracking tools to encourage healthier lifestyles among employees. Alongside managerial trends in personalized, preventative and participatory medicine (Swan 2012), some workplaces have begun to pilot their own programs, utilizing fitness wearables and personal analytics

to reduce sedentary lifestyles. These programs typically take the form of gamified self-tracking challenges combining cooperation, competition, and fundraising to incentivize participants to get moving. Most common among these are “take the stairs” campaigns and other step counting activities that vary in terms of what can be tracked, duration of the program, and goals of the challenge. Ultimately, what is becoming clear is that personal health, wellbeing and even lifestyle are now seen as important determinants of organizational development. If these trends lend credence to what Kelly (2015: 5) argues is “the cultivation of the self as enterprise,” then what role do devices and self-tracking play in that development? While many commentators are quick to question whether employees are being disciplined to adopt these practices, or otherwise, the extent to which they are able to choose or modify the goals of self-tracking, we argue that rather than reproducing tensions inherent to this dialectic, there is more to be gained by focusing on what emerges from them.

This paper explores these themes through an empiric case study of self-tracking challenges for staff and faculty at two Canadian universities — McMaster University, in Hamilton Ontario and the University of British Columbia (UBC), in Vancouver British Columbia (BC). In order to understand how these sites interpret the objective of self-tracking, we trace the notion of wellness as stemming from public health promotion strategies in each of the two universities’ home provinces. Against this background, we examine the notion of the self as enterprise as a heuristic for interpreting the self in the workplace. We conclude by highlighting the role of self-tracking devices and their potential for fostering yet another shift in contemporary understandings of the self.

Methods

This study consisted of both primary and secondary research. For primary research, we contacted two staff members involved in administering each self-tracking challenge to participate in a one-hour semi-structured interview. In both cases, these were individuals working in the area of employee engagement and wellness as part of the human resource and organizational development departments (hereafter referred to as “wellness developer”). For secondary research, we traced a brief history of the relevant provincial health promotion activities. Since both the Ontario and British Columbia public health agencies no longer existed at the

time of research,¹ much of their original reports and documents were no longer available,² and so we had to resort to the Internet Archive's Wayback Machine (<https://archive.org/web/>). As such, many of the documents collected included screenshots, reports, consultations, marketing material and infographics.

BECOMING WELL: DISCOURSES OF WORKPLACE WELLNESS

In order to situate how self-tracking challenges were adopted in these workplaces, we begin by discussing broader transformations to the notion of wellness.

Pursuing the healthy body

Citing issues with the categorical definition of wellness as “a state or condition of good health” and, intending to trace how the very *conditions* of good health have changed, we define wellness as *an intervention in a particular discourse of health*. Part of the reason why we define wellness in this way is that it evokes the modern sense of the healthy individual as an engaged participant involved in self-care; the self is situated “at the center of action-taking in relation to health and healthcare” (Swan 2012: 97). In an era where one's health is simultaneously a form of self-expression and personal responsibility, the body becomes an advert, a billboard expressing one's personal market value, optimized in a form where its economic value, its wellness, can be assessed (Cederström and Spicer 2015: 4). Of course, how wellness is evaluated depends on what we believe is or is not desirable.

-
1. While beyond the scope of this paper, in both provinces, the agencies that first established their respective programs transitioned to new governance models, eventually, coming under the mandate of different ministries. In Ontario, Active2010 was established by the Ministry of Health Promotion, which changed its name in 2010 to Public Health Ontario, and by 2011, was merged into the Ministry of Health and Long-Term Care (alPha 2014). In BC, ActNow BC was established by the Ministry of Health, but responsibility for the program soon transferred to the Ministry of Tourism, Sports and the Arts, which in 2008, became the Ministry of Healthy Living and Sport (Public Health Agency of Canada 2009: 16–18).
 2. For Active2010, the Ontario campaign that ran from 2005–2010, a number of phone calls with a variety of departments yielded no clues as to why almost no information, even though it was a multi-million-dollar program with its own website that was active up until 2014, has been erased from existence. In another case, we had to resort to microfiche archive material of government initiatives just to see the core strategy document.

Pursuing good health is synonymous with making use of biological and medical knowledge. Indeed, according to Neff and Nafus (2016: 19), bio-medicalization has become “the most readily available explanation for why things are the way they are.” Here, a premium is placed on the body as a kind of truth system: “by interrogating our bodies and listening to their most subtle signals, we are told we can find the truth, not just about who we are, but about what constitutes the good life” (Cederström and Spicer 2015: 26). Together with broader trends in personalized, preventative, and participatory medicine (Swan 2012) and digitized health promotion (Lupton 2013), what becomes most desirable is close measurement and quantification of the body. Wellness has come to mean any activity associated with that task — measuring, understanding, and optimizing the bio-medicalized body. But neither is wellness merely the pursuit of these tasks and goals; according to Cederström and Spicer (2015: 5), wellness has become an injunction: “today wellness is not just something we choose. It is a moral obligation.” As a moral obligation, wellness is the responsibility of the individual. Those who face an increased likelihood of ill-health have only their own habits to blame, they just need to “listen to the wisdom of their body.”

When wellness takes on the qualities of a moral imperative, we have the duty to be healthy, or at least, to make our bodies appear healthy — and part of that now includes casting oneself as a healthy worker. For those fortunate enough to find employment, this way of understanding the body pushes one to optimize work-time and leisure-time, where the most important currency becomes not wages but energy. Recent inventions like the treadmill or bicycle desk conjure images of a health-conscious employee, one who understands just how precious energy is — because they are now also generating the power for their laptops and other workplace devices (Hamblin 2014). Developing this further in his writings on quantified self and the transformation of exercise into labour, Till (2014: 454) writes that “self-tracking is an ingenious means by which energy that is being expended anyway can be analysed and transformed into productive, profitable (unpaid) ‘work’.” Previously, even within a neo-liberal paradigm of individual responsibility, conserving optimal time and energy for engaging in fitness, sports and health-related activities was something that happened after work, but today work has become an ideal time and place to engage in self-care (Cederström and Spicer 2015: 38). Indeed, workplace self-tracking challenges often draw on the familiar trope that a happy and healthy worker is a productive one. Even so, workplace health initiatives are not just about creating a happier, healthier, more productive or cost-effective workforce — studies have shown that such improvements are relatively minor (Mattke et al. 2013)

and more often shift the burden of these costs to those most likely to be unhealthy (Horwitz et al. 2013; Neff and Nafus 2016: 56).

When the logic of personal responsibility is combined with a moral responsibility for wellness, it not only changes how individuals present and see themselves, it also reshapes how they view others (Neff and Nafus 2016: 39). Those who do not present a “healthy body,” are stigmatized. Those who do not monitor or make “good” lifestyle choices (i.e., in terms of physical, financial, or emotional wellness) become an at-risk population in need of intervention — not in terms of efforts to address systemic inequality, but rather, small-scale lifestyle interventions and personal rehabilitation. “Here, the unemployed are not provided with an income; they get life coaching. Discriminated groups don’t get opportunities to celebrate their identities; they get an exercise plan” (Cederström and Spicer 2015: 134).

As the contemporary notion of wellness took a shape, it shifted from a concern with the *conditions* of “good health” (e.g., socio-economic inequality) to the logics of bio-medical scrutiny and neoliberal responsibility (e.g., a personal choice). The pursuit of good health meant freeing oneself as much as possible from these conditions; good health became an effort in itself that was socially, culturally, economically and morally desirable. In the next section, we provide additional background on how this contemporary notion of wellness took shape in the Canadian context.

Provincial health promotion campaigns 2005–2010

In Canada, official conceptions around health and wellness can be traced to national and provincial public health promotion efforts that have focused on healthy behaviours, physical activity, and participation in sport. In 2005, both Ontario and British Columbia created their own 5-year provincial sport and physical activity strategies — ACTIVE 2010 and ActNow BC respectively. In Ontario, these early efforts had such goals as increasing the proportion of those engaging in physical activity from 48% to 55% by 2010 (Ministry of Health Promotion 2005: 10), while BC set the loftier goal of increasing participation in physical activity from 58% to 70% by 2010 (Public Health Agency of Canada 2009: 2).

The strategy to achieve these goals initially involved subsidizing and investing in regional and municipal facilities, programs, and sports to encourage residents to adopt healthier lifestyles. While these programs were effective to some degree, decision makers also realized that simply increasing the accessibility of sports facilities and other means of participating in physical activity did not encourage everyone to change their

behaviour. Longer work-days, a competitive atmosphere, equipment costs, risk of injury, digital distractions, and so on, made participation in physical activity and sport out of reach to some and unpalatable to many (Ministry of Health Promotion 2004). Compounding the problem was that many working Canadians had become accustomed to sedentary lifestyles — to make physical activity part of everyday life, it needed to be re-branded as a “spontaneous opportunity” where achieving wellness meant profiting from “moments to be active” (ibid.).

The solution to this problem came in realizing that the public should not only be conceptualized as one-way *recipients* of health promotion and physical activity services, but rather, should be *actively engaged* in its design and implementation. Effectively, the goal was to encourage those at-risk to become responsible for promoting their own health (Lupton 2013: 8). But of course, this was not a decision that could be left entirely up to citizens themselves. In the era of evidenced-based decision-making public health ministers, subject-matter experts, various stakeholders and interest groups joined together, not to exhort individuals, but in their own words, to “facilitate” and “encourage” them to make the right choices (ActNow BC 2006; Active2010 2008; Public Health Agency of Canada 2009).

As the provincial health strategies matured, health promotion marketing materials began to focus on walking as the most accessible way to participate in a healthy lifestyle.³ In Ontario and in BC, public health ministries created pedometer challenges (Active2010 2007; BCRPA 2010, 2013). In much of the marketing materials, walking is presented as a panacea that would reduce the risk of disease, boost energy, prevent diabetes, strengthen bones and joints, and maintain a positive body image (Ministry of Health Promotion 2010: 2). In order to enjoy these benefits, one needed to “make every step count” and achieve between 7,000 and 16,000 steps per day. To aid in this endeavor, pedometers were made widely available at little to no cost for all who signed-up. A few provincial health promotion initiatives even created their own online interfaces, enabling participants to upload, track and share their progress.⁴

3. One of the main pillars of ACTIVE 2010 was the provincial walking campaign. Posting advertising materials at locations frequented by “at-risk” populations, including “transit shelters, disposal bins, libraries, hospitals and health centers” (Canada NewsWire 2005).

4. Although not included in this report, the province of Alberta is the only province whose online portal for pedometer tracking, “UWalk” is still online. See www.uwalk.ca

While walking campaigns initially targeted physical activity during leisure-time, this did little to address sedentariness at work.⁵ Other than longstanding education and awareness campaigns, specific activities were introduced in order to target wellness in the workplace, activities that invariably, involved some form of self-tracking (Ministry of Health Promotion 2010: 12–13). As the provincial health initiatives lapsed in 2010,⁶ a booming industry of health consultants and corporate wellness programs soon took their place promoting these specific activities (stair-well challenges, 10,000 step challenges, and bike to work campaigns) as workplace wellness best practices. Much of the basis for recommending these specific activities came from university-led research, touting the benefits of step-based (Chan et al. 2004; Craig et al. 2006) and take the stairs (Morris and Choi 2005) campaigns. Not surprisingly, universities that conducted this kind of research, particularly those with affiliated hospitals or health science departments, were ideally-suited to adopting these campaigns and notions of wellness.

Situating wellness in the workplace

So we're not necessarily asking you to go to the gym, we're not asking you to go to a class on your lunch hour, we're just asking you to walk, or to get up from your desk to break up your day. So I think that Walkabout came around at a good time, when all of that information [health benefits of walking] was kind of being primed for people. [UBC Wellness Developer]

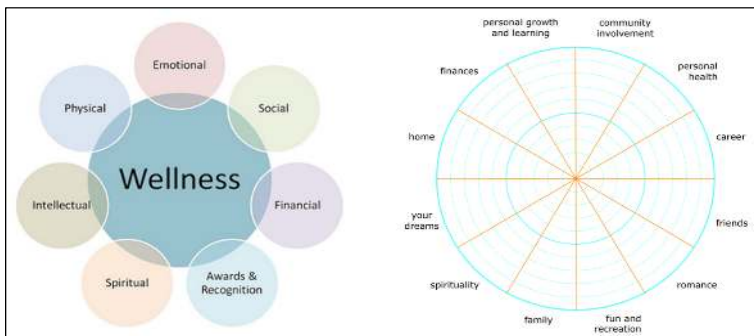
As these provincial campaigns disappeared, two prominent Canadian universities developed their own workplace self-tracking challenges. Taking place annually since 2006, both McMaster's MActive Challenge, and UBC's Walkabout are directed to all university staff and faculty. Both human resource development programs are organized around participants tracking their steps using pedometers, cellphones, or software applications. Additionally, both programs offer non-step conversion tools enabling participants to keep track of activities that a pedometer cannot measure, such as stacking firewood, or shopping for groceries (see Figure 2) (McMaster 2015; UBC 2014b). While the challenges

5. According to one provincial health initiative: "10.5 hours of Canadians' waking day is spent inactive at or commuting to work" (ActNow BC 2006: 2).
6. Consistent with findings elsewhere, "health promotion programs have been subjected to cuts or downsizing in an economic context in which other public health approaches have been prioritized: particularly those that appear to offer short-term savings for governments" (Lupton 2013: 5; see also Sparks 2013).

differ in terms of overall goals (e.g., total distance, number of steps), achievements and prizes, and additional dimensions of wellness to track (e.g., “social steps”), they do share a common understanding of wellness.

At McMaster, there are seven dimensions that comprise workers’ wellness: physical, emotional, social, financial, intellectual, spiritual, and awards and recognition (see Figure 1) (McMaster 2016). According to its website, “vitality in personal wellness must be present before an individual can maximize their full potential in the workplace” (ibid.). At UBC, the notion of wellness is expanded to include: fun and recreation, personal growth and learning, community involvement, personal health, career, friends, romance, family, spirituality, dreams, and home (see Figure 1) (UBC 2014a). The significance of self-tracking in addressing each of these components of wellness lies in its ability to convey a sense of personal empowerment. Although other health promotion initiatives at both universities sometimes target one component of wellness at a time — for instance, mental health week or financial wellness lunch and learns — the MACTive and Walkabout challenges target the “whole” employee; promising wellness through what Lupton (2013: 26) describes as “digitally engaged self-monitoring.” Consistent with the broader changes at the provincial level discussed above, health promotion initiatives at both universities are presented as simply facilitating and encouraging employees to make the right choices — and that ultimately, their wellbeing is their own responsibility.

Figure 1 Wellness Wheels, McMaster and UBC



Source (left to right): McMaster 2016; UBC 2014a

This sense of empowerment gained through digitally engaged self-monitoring can quickly become an obligation, especially when a self-tracking challenge is combined with existing organizational development efforts. Organized around walking and the use of pedometers, measuring all forms of activity in terms of steps is an obligation by default. Additionally, beyond requiring participants to self-monitor everything in terms of steps, workplace self-tracking challenges also involve team-building rituals combined with the development of a personal work ethic.

Each week, participants submit their total step count to their team captains who then upload it to the challenge coordinator. Teams can then view these weekly totals, use them as benchmarks to try and improve, and even determine which team member(s) may require targeted intervention in the form of additional motivation and support. Under these circumstances, being accountable to fellow team members was essential for nurturing a sense of trust and belonging to a team that is more than the sum of its parts. MACtive team captains each developed their own ways of bolstering this sense of accountability — for instance, peer-to-peer recognition in weekly newsletters did not report on winners and losers or overall leaderboard standings, but instead would showcase those most improved or other achievements so as to not de-motivate participants [McMaster Wellness Developer]. In this way, meeting the expectations of the team would provide positive reinforcement of the self-tracking challenge's marketed goal of personal wellness.

Another way to ensure teams stayed motivated was by cultivating a strong sense of group identity. At the start of both challenges, teams designed their own names, often reflecting membership in a certain department or faculty (e.g., Educational Stepologists and BCom Roamers); in other cases, playing off inside jokes directed at certain workplace nuances or puns on popular culture (e.g., Cirque de Sore Legs, and Bill Gaits & Steve Jogs) (UBC 2016a). With this added dynamic, participants were not only responsible for self-tracking and reporting, but also for promoting group identity by uploading photos, creating gifs, and memes (UBC 2015), and perhaps most of all, walking with others. At UBC, "walking with others" was further incentivized through a step multiplier; Walkabout participants were able to double their weekly step-count if they walked together (UBC 2016b). What may have started out for some as a way of achieving one's *personal* health goals (UBC 2014c), by the end of the challenge, had become a *team health initiative*, with winning and being recognized foremost among participant's priorities. [McMaster and UBC Wellness Developer]. In this way, "wellness" came to mean not only "good health" in any of those 7+ dimensions, it also came to mean *working well* — a notion consistent the "new work ethic"

(Bauman 2005) of 21st century knowing capitalism (Thrift 2005). Here, the injunction to participate and be a motivated team player extended far beyond the immediate goals of the self-tracking challenge. The obligation to take up and perform these series of injunctions — these new practices for managing labour (Thrift 2005: 10) — entangled into the very *conduct* of life.

Indeed, over the course of the challenges, not only were official job tasks considered work, but walking and other activities were also considered valuable components of the work day. For instance, the UBC Wellness Developer stated:

And I think if anything, they were trying to encourage them to come out more, or encourage them to shift around their schedule, or prioritize their own health. [They might say] ‘it’s just good for you, take a break, your lunch, or is there a way we can help you, or I can finish that report for you, so that after we can go together and we can walk.’ [Walkabout] promoted that sort of collegiality and sharing some of that workload in order to set everyone up for success.

Blurring the lines between work and life, work of *all kinds* becomes attractive and pleasing, prized for its aesthetic value and raised “to the rank of supreme and most satisfying entertainment” (Bauman 2005: 34). Work is no longer about simply sitting at a desk, instead,

going to work, means I’m going to do my job well, I’m going to have time for breaks, I’m going to be able to eat the food that I want, socialize with the people that I want and leave at the end of the day with enough energy to participate in my life outside of work as well [UBC Wellness Developer].

Within these prevailing discourses of wellness, whether it is “work on the self,” or work as “the conduct of self in the workplace,” work is seen as an aestheticized act of personal choice — the “arts of oneself” (Foucault 1997a). Whether it is the work of self-care or the workplace, work itself becomes gratifying, self-fulfilling, and a source of pride and self-esteem (Bauman 2005: 35). As Cederström and Spicer (2015: 38) argue,

When work becomes exercise and exercise a form of work, we begin to notice the blurring of boundaries between what have previously been separate activities. Taking a walk while talking about budgets, cycling at your desk or even surfing during lunch all fuse moments of leisure and labour. Far from being a barrier to taking care of our health, work becomes a time and place where we can engage in self-care. But working-out also becomes a kind of labour of keeping an idealized corporate body in shape.

Self-tracking as a personal work ethic (Lupton 2014), a mode of conducting one's self, becomes the most enjoyable means of accomplishing one's self. According to Bauman (2005: 33), the decision to engage in this or that form of work is judged "by its capacity to generate pleasurable experience." Taking all of these developments into consideration, wellness and self-tracking are simply presented as choices; choices that are not only morally, ethically and aesthetically pleasing, but also, choices that carry the promise of being able to exercise greater control over one's future.

Discussion

We have seen that powerful incentives and imperatives provide the frame in which to, not only, imagine these choices, but also, shape our sense and conduct of self. And yet they do not determine how this project of the self unfolds; they are not new vectors of discipline or control from above, but rather, come from within.

Contemporary understandings of wellness have amplified concern with the self, not just by knowing one's self, through for instance, self-tracking, but also by knowing the ethical rules of acceptable conduct — self-tracking as ethical obligation, as care of the self (Foucault 1997b: 285). For Foucault, the source of these ideas are models proposed, suggested, and imposed on us by our culture, our society, and our social groups (1997b: 291) — and throughout this section we illustrated how wellness took shape through a variety of incitements and injunctions put forth in provincial and workplace health initiatives. When tied to personal responsibility and individual choice, however, these ideas appear, instead, to emerge "from personal desires and voluntary objectives related to the achievement of health [...] rather than from imperatives issued by the state or other sources of authority" (Lupton 2016: 50). Thus, while the choice to engage in self-tracking appears to be inflected with personal desires that are themselves shaped by these sources of authority (i.e., the larger discourse of health, or, prevailing understandings of wellness), when these very ideas are enacted, that is, put into practice, they are in turn, shaped once more by one's own ideas and practices (Ruckenstein 2014: 70). "Practices like these," argue Neff and Nafus (2016: 95), "do not lend themselves to being codified." As individuals take up practices of self-tracking, "they add their own views or come to modify and adapt them" (ibid.), according to the whims, fancies, and styles of their own project of the self (Van Den Eede 2015: 157; Verbeek 2011). These styles, or "self-practices" are how we experiment with and imagine the aesthetics of existence — they are what Foucault calls, "technologies of

the self” (Foucault 1997a: 225). In this sense, self-tracking as an ethical form of self-care means “paying careful attention to one’s subjectivity and shaping one’s life in a desirable way” (Verbeek 2011: 75).

Rather than reproduce inherent tensions in this dialectic, for us what is important is not just pointing to sources of power that constrain, discipline or delimit individual choice — nor is it a matter of the opposite, vouching for individual agency in shaping those moments. Ideas around what is work, what is wellness, what is the self, are better seen as constituted by these dialectical tensions (Schüll 2016: 12). Enacting one’s own desires for wellness are tightly interwoven within “a complex interaction of techno-scientific practices, market interests, cultural habits, and so forth” (Van Den Eede 2015: 152). Perhaps it is this very interwovenness that defines the *whole activity* of self-tracking.

Throughout this section, we have traced how the concept of wellness took shape within an assemblage of: health promotion initiatives, workplace ethics, and the rise of self-tracking as a contemporary mode of care of the self. These broader cultural practices and ethical-moral injunctions for understanding “the healthy body,” not only inform which decisions are advisable, but also provide models for how to enact those decisions. It is within this complex interplay of choosing among “a constellation of habits, cultural norms, material conditions, [and] ideological constraints” (ibid.) that the notion wellness took shape. Wellness became something to be undertaken; something that could be planned, endeavored, ventured, or approached with the logics of enterprise.

BECOMING THE SELF: THE SELF AS ENTERPRISE

[They] assume that if [Walkabout] is coming out of HR, then the university is doing this so they can save money on our health care costs, or they’re doing this so they can bring down their extended medical or disability costs. Obviously we look at things like that, and those are goals that we have, but that is not what [Walkabout] is about. We want people to feel engaged at work. We want people to feel proud of the work they are doing, feeling connected to the work they are doing, and if we can run programs that exist outside of that traditional work environment that can have an impact at work, then we’re on the right track. [UBC Wellness Developer]

As self-tracking challenges meander into workplaces, transforming “occupational health and safety” into “occupation health and wellness,” they are met not only with enthusiasm, but also skepticism and suspicion. Workplace health and fitness programs have been increasingly added to the corporate mandate as a means of reducing absenteeism and

productivity-loss due to illness. Dismissing fears of surveillance, health promoters emphasize their role as “mere facilitators” — encouraging active engagement, connectivity and personal responsibility (Cederström and Spicer 2015: 44) — and at the same time, champion the rhetoric of “work-life integration” (Kelly 2013: 174). In doing so, one’s concern with personal health and wellbeing are channelled alongside the employer’s concern with enhancing worker performance and productivity.

But while the business case for adopting workplace health promotion initiatives may initially be presented as a cost-saving measure,⁷ as the quote from the UBC Wellness Developer stresses above, they are advertised as a means of taking care of the self, thereby blurring self-care with taking care of the company. At UBC, Walkabout is a great first step,

because we’re getting people to recognize the times of year where maybe they have a bit more flexibility, the times of year where maybe they have a bit more time, and if they’re able to prioritize their time to participate in something that is going to impact their wellbeing then that’s great. We’ve already shifted the dial on their behaviour [UBC Wellness Developer].

By *working on wellness* through self-tracking, both MACTive and Walkabout reinforce a sense of self in terms of improvement and enterprise. Once understood as such, self-tracking as a conduct of enterprise becomes a means of “demonstrating [participants could] manage their own affairs and control their bodies in socially acceptable ways” (Neff and Nafus 2016: 24). Bolstered by pervasive imagery of healthy and successful individuals who have seemingly transformed meritocratic reverie into reality, participants are encouraged to act like a corporation — to plan, invest, and restructure in order to increase rewards (Cederström and Spicer 2015: 22). This form of self, as enterprise, in self-tracking scenarios promises salvation from all the minor and mundane afflictions of workplace mediocrity and boredom. As reflected in a comment by the McMaster Wellness Developer:

You’re supposed to keep it light and at the end of the day, as long as you’re having fun, whether it be by yourself or with a team, and you’re walking more than you did when the challenge started, it’s considered a big win.

7. The evidential basis for many of these arguments in Canada can be traced back to a single source: reports that were produced between 2006 and 2007 by Dr. Graham Lowe and the Graham Lowe Group Inc., a consulting firm that has long championed the benefits of “Creating Healthy Workplaces.” See: The Graham Lowe Group 2006, 2007, as cited in ActNow BC 2007; Public Health Agency of Canada and CCHALW 2007; Ontario Workplace Coalition 2013.

Workplace self-tracking challenges promise to address major health problems associated with cardio-respiratory illness and sedentary lifestyles — a promise given to the extent an individual is willing, bears responsibility for, chooses to, engages in, or has the capacity to transform themselves as passionate and enterprising about wellbeing, and therefore, passionate and enterprising about their job (Kelly 2013: 148-9).

Motivated by more than just an opportunity to improve one's health, these workplace challenges often incorporate a team-dynamic to ensure active and prolonged participation in self-tracking. But while these efforts bolster personal health, exercise and diet goals with collegiality and group competition, the academic setting of both MACTive and Walkabout also provided a chance for participants to employ their research skills. Faculty would often “do their research before they started [...] to make sure that what they were doing was right” [UBC Wellness Developer]. Doing research was not only part of their normal work day, but in the spirit of the challenges, also became a means of determining how to maximize energy and outperform others. The cultivation of the self as a life-long activity breathes new purpose into going to work (Kelly 2013: 71). Even for those lower on the leaderboard — those who were not “in it to win it” — the competitive aspects of the challenge remained the main motivating factor [McMaster Wellness Developer]. Facilitators, team leaders and participants created alternative challenges and other forms of recognition and achievement in order to acknowledge the range of participation (McMaster 2013; UBC 2016a).

Always striving to be more inclusive and equitable, both university challenges gradually incorporated “walk and roll” and non-step activity conversion charts (McMaster 2015; UBC2014b). Seeking to remove barriers to participation, these efforts soon subsumed other activities into the “step” challenge. For those preferring other activities, conversion charts helped recognize that not everyone likes to do, or is motivated by the same things. As the UBC Wellness Developer further explained:

It's nice to be able to see the equivalent. [Participants will say] ‘oh wow look at how much that is in steps, that's amazing, I'm going to keep doing this, because it's really good for me.’ [Non-step conversion] gives them additional motivation for what they are doing, without them having to feel like they need to fit into a specific box of what physical activity looks like.

An evolving, shaping process, these inclusionary practices serve to integrate a broader constellation of activities into the workplace. Discourses of health promotion and productivity solidify connections between performance at work, work on the self, and the lifestyle you can fashion (Kelly 2013: 178). As the self is shaped and understood in terms of the ethics of enterprise, the more one's conduct can be considered as something to be managed, commodified, and consumed (*ibid.*: 81).

Figure 2 Step Equivalencies, UBC and McMaster

Convert Activity into Steps

Use this chart to convert activities that are not easily measured by a pedometer. Multiply the number of minutes by the number of steps per minute to get the number of steps. Use only the limited, converted steps for your step count. Do not also include the pedometer steps if you were wearing your pedometer while performing the activity.

PLEASE NOTE: Conversions are estimates; your actual steps may vary

Activities	Steps/Minute*	Activities	Steps/Minute*
Aerobic dancing class	127	Mowing lawn	120
Aerobic fitness class	181	Painting (a room)	78
Aerobics, low impact	125	Plates	91
Aerobics, step	153	Punching bag	180
Backpacking	181	Raking leaves	121
Badminton, casual	131	Racquetball, casual	181
Badminton, competitive	203	Racquetball, competitive	254
Ballet dancing	120	Rock climbing	244
Baseball	130	Rollerblading	156
Basketball, game	145	Rowing	147
Basketball, recreational	130	Rowing machine	212
Bicycling, easy pace	130	Rugby	303
Bicycling, moderate pace	170	Running, 12 - minute mile	178
Bicycling, vigorous pace	200	Running, 10 - minute mile	222
Billiards/pool	76	Running, 8 - minute mile	278
Bowling	71	Sailing, boat and board	91
Bowling on the Wii	61	Scrubbing floors	71
Boxing, non-competitive	131	Scuba Diving	203
Boxing, competitive	222	Shopping	70
Calisthenics	108	Shoveling snow	145
Canoeing	91	Skateboarding	102
Cheerleading	100	Ski/iceball	52
Children's playground game	136	Skating, light/moderate	109
Circuit training	189	Skating, cross-country	114
Climbing, rock/mountain	270	Sliding	158
Cooking	61	Snowboarding	182
Croquet	76	Snowmobiling	106
Dancing, class	109	Snowshoeing	181
Dancing, salsa/country/lineing	109	Soccer, recreational	181
Dancing, party	109	Soccer, competitive	145

Non Step Conversion Tool

There are many times that a pedometer cannot measure the number of steps taken during an activity. During these times keep track of the duration (in minutes) of the activity. By using the chart below multiply the number of minutes by the number of steps per activity. If your activity is not listed below, please use the activity that most relates.

Steps	Activity	Steps	Activity
145	Aerobics (low impact)	101	Pilates
246	Aerobics (step)	116	Ping Pong
131	Badminton	203	Racquet sports
174	Basketball	125	Raking leaves
116	Bicycling, leisurely	203	Rollerblading
203	Bicycling, moderate	101	Rowing, light
87	Bowling	463	Rowing, moderate
87	Canoeing, light	203	Running, 10 mph
232	Circuit Training	391	Running, 8 mph
232	Cross-country skiing	290	Running, 6 mph
125	Curling (sweeping)	232	Running 5 mph
131	Dancing	203	Scuba diving
174	Downhill skiing	174	Snow Shovelling
203	Elliptical Trainer	182	Snowboarding
145	Firewood, carrying/stacking	203	Soccer
260	Football	145	Softball
116	Gardening (light)	348	Squash
174	Gardening (heavy)	180	Stair climbing (light)
131	Golfing, without a cart	260	Stair climbing (moderate)
101	Golfing, with a cart	72	Stretching
67	Grocery Shopping	203	Swimming
348	Handball	116	Tai Chi
172	Hiking, general	232	Tennis
116	Horseback riding	101	Trampoline
260	Hockey	87	Volleyball
101	Housework, general	87	Wash the car
230	Ice Skating	116	Water aerobics
203	Jumping Rope	174	Water Skiing
180	Martial Arts	87	Weight lifting, moderate
260	Mowing the lawn	174	Weight lifting, vigorous
131	Painting walls	145	Yard Work
131		72	Yoga

Source (left to right): UBC 2014b; McMaster 2015

In addition to personal and social goals, many teams also incorporated a fundraising component for charities of their choice. As physical activity of many forms has increasingly been connected to fundraising (see: Nettleton and Hardey 2006; Bennett et al. 2007), self-tracking is cast as a charitable form of active citizenship or digitally-engaged philanthropy. Self-tracking as an enterprising form of conduct becomes *the means* of achieving the moral imperative to care for the self, the company, and others. Much of the work, then, in establishing a successful workplace self-tracking challenge is not so much about ensuring a critical mass of recruitment, most of the free-labour of both promoters and participants alike is in articulating alignment between various discourses, practices, and performances (Terranova 2000). Self-trackers are not just players or contestants in a game, they are actively involved in (re-)creating the longevity and legitimacy of the wellness initiative itself.

I think it's creating a culture of health and wellbeing at work. Which is something that's a very new and different concept to a lot of people, particularly those of the older generations. You know, previously it was 'you come to work, you put your head down, you put in your hours, and you leave.' And that changed and evolved a lot over the last few years, and so I think it's creating a culture, a work culture where looking after your health and wellbeing is acceptable and encouraged [UBC Wellness Developer].

Care for the self, as enterprise, offers particular ways of maintaining a "relationship with the self: for self-reflection, self-knowledge, self-examination, for the decipherment of the self by oneself, and, finally, the particular reconfigurations that one seeks to accomplish with oneself as object" (Kelly 2013: 124). The self becomes something to be harnessed, repaired, optimized, researched and developed, and utilized – in a way, not too unlike the technologies employed in the challenges themselves.

CONCLUSION: BECOMING YOUR OWN DEVICE

The injunction to self-manage through tracking [...] is not a purely autonomizing formula but instead falls somewhere between enterprise and submission, responsibility and discipline; we might say that it is constituted by these tensions (Schüll 2016: 12).

So far, we have discussed workplace self-tracking challenges as contemporary "technologies of the self" that are organized by the logics of enterprise and a moral imperative of wellness. These and other methods of promoting active and engaged workers (e.g., team building, conver-

sion charts, charitable giving, etc.) extend far beyond fashioning complacent workers (dis)empowered by pedometer devices — they also offer a chance to *devise* what *works*. Through discourses of wellness and practices of self as enterprise, workers are not only left to these devices, but are becoming like them, at least, in a heuristic sense.

For some Walkabout participants, the end of the nine-week challenge was met with feelings of ambivalence and adjournment. Even those who stopped using a pedometer after Walkabout internalized the challenge and made self-tracking a habit. For instance, the UBC Health Wellness Developer recalled some participants saying: “I know how much walking in my day I need. I don’t need to track anymore.” For others, given the prevalence of personal health and self-tracking technologies (e.g., FitBit, Misfit, Garmin) many continued to track after the challenge, as they enjoyed “having that constant, consistent reinforcement in being able to see their numbers at the end of the day and at the end of the week. [...] People want to know information about themselves, they like numbers, they like being able to quantify things” [UBC Wellness Developer].

Similarly, at McMaster, MActive organizers have observed a consistent rise in the number of participants wearing activity trackers year-round. As a result of this rising prevalence of bring your own device and self-tracking, health promotion-related programming is changing. Health promotion staff are now looking to organize an entire month around the idea of “know your numbers-based programming” urging employees to quantify a variety of measures, such as heart rate, cholesterol and even financial wellness. According to the McMaster Wellness Developer, this is based on the observation that quantification “seems to strike a bit of a nerve with our employees. The minute you can quantify something [...] it tends to motivate them more.” Echoed here is the belief, identified by Lupton (2016: 95), that quantified personal data,

are an avenue to self-knowledge; are powerful entities; that it is important not only to collect this data on oneself but to analyze it for patterns and insights [...] that self-tracked data provide greater insights than information received from our senses; that self-tracked data can be motivational and inspire action; [...] and that data about individuals are emblematic of their true selves.

While we observed efforts in both challenges to encourage trust in numbers – and self-tracking technologies and data visualization certainly make that even more appealing (Ruckenstein 2014), participants did not take this on blind faith alone. The incitements and encouragements to trust the numbers were not just ideas and ideals shaped by different Quantified Self communities (Neff and Nafus 2016: 30–34). The re-

quirement to monitor and report, the requirement to quantify, also comes from a body habituated to management through information (Viseu and Suchman 2010: 174). An unstated goal of the MActive challenge is to motivate participants to continue developing a healthy lifestyle by making self-tracking a habit beyond the six-week challenge. The body, the self, produced through self-tracking is not only the *subject* of scientific measurement and interpretation, it is also the *product* (Lupton 2016: 98).

This idea of the self in relationship to itself, is often discussed in terms of the dual character of governmentality: the interplay of power and control, freedom and choice. Heuristically, “becoming your own device” seems to suggest a restrictive, delimited or constrained space (e.g., an iron cage or docile bodies) in which to enact care for the self. In other words, a becoming that further embeds one within a technical understanding of the self that Rose (1999) identifies as the particular interpretation of the person in contemporary forms of governmentality (Kelly 2013: 41). Rather than referring to this further technical embeddedness, we contend that the notion of becoming your own device also shares in this dual character of governmentality. In addressing the arts of governing, Foucault (2007: 44) argues that the question of how to govern cannot be dissociated from the question of how *not* to be governed. In much the same way, our interpretation is that the meaning of *your own* in becoming your own device suggests a becoming that is of one’s own *devising*. This devising (or critical attitude) is not simply a total refusal to be governed or regulated,⁸ it is more particular and situated.

By focusing on the tension between *devising* and *device-ing*, the notion suggests that even fully quantified selves have the possibility of being otherwise. For Neff and Nafus (2016: 188), “the line between ourselves and our data is where we choose to draw it.” Data assemblages are configured and reconfigured — constantly open to reinterpretation (Lupton 2016: 89; Cheney-Lippold 2017). Through this process of becoming, freedom is not solely about pointing out (or searching for) empirical examples of what it might look like; for instance, “voluntary insubordination” or “reflected intractability” (Foucault 2007: 47). Rather, we intend the concept to enable us to explore situated instances of irony, ambivalence, ambiguity, and play. Acknowledging that the fields of possibility in which power and freedom is practiced are always mutable — never

8. Foucault argues that “in the search for ways to govern,” it is not simply a question of determination by opposition, but rather a question of “how not to be governed like that” (Foucault 2007: 44, emphasis in original) – a perpetual asking of both questions (how to govern and how not to be governed); a critical attitude, “the art of not being governed quite so much” (ibid.: 45).

entirely open, not wholly constrained (Kelly 2013: 68) — we wish to ask: how are the very concepts of “self” and “device” transforming as wearables and quantified self practices circulate and become more commonplace?

Practices, habits, patterns of interaction do not keep their shape for long; “shaping them is easier than keeping them in shape” (Bauman 2000: 8). But perhaps it is also the case that these mercurial practices, these docile bodies becoming devices, do not stay amenable to shaping for long either. Thus, we submit that in considering becoming your own device heuristically, we can see more clearly the ways in which understandings of personhood are being framed by powerful narratives that position individuals as not only free to choose (in the sense of the entrepreneurial spirit of knowing capitalism), but also, obliged to do so (c.f. Kelly et al. 2007: 282).

Earlier we mentioned that the notion of becoming your own device brings into view instances of irony, ambivalence, ambiguity and play, and this is perhaps a third way of interpreting the title — as referring to a kind of companionship that develops between the self, the wearable, the data double, and so on. And in the context of self-tracking challenges in the workplace, when devices are able to produce lifestyle and healthy habits “through alliance and mutual assistance rather than domination” (Thrift 2005: 211), we can no longer easily distinguish between vocation and avocation, job from hobby, work from recreation — self-tracking at work itself becomes a “supreme and most satisfying entertainment” (Bauman 2005: 34). Just as the old notion of work-life balance is better seen as inter-dependent, so too with self-trackers and their devices, whose dual pursuit of wellness locks them in an inter-dependent process of becoming.

With that in mind, we are interested in seeing further research that explores crossovers between “caring for the device” (i.e., charging, cleaning, calibrating, configuring) and the ways in which self-trackers practice “care for the self.” This would not seek to continue the work of purification (Latour 1993), of separating or delegating which practices belong to the human or non-human actants, but would rather continue the difficult task of examining the “often mundane checklists, processes, guidelines, policies, rationalities, and ideas” that encourage workers to be more effective (Kelly et al. 2007: 282) — in this case, by instilling a desire to become device-like. This research would also work to problematize the obligations, responsibilities and consequences that emerge out of the incitement to self-track at work — pointing out for instance, how the aesthetic and ethical values of self-tracking become potentially

potent stratifying factors “for different occupations, different sectors of the economy, and different populations of workers” (ibid.).

And yet, the price to be paid as we “become our own devices” and witness the rise of self-tracking, wearables, and the quantified self is not likely to be only a story of exploitation, neoliberalism, and empowerment/disempowerment, nor simply one of loosely-connected groups and individuals variously shaping the program and the outcomes. It is a story that will play out at the intersection of both of these tensions, driven forward by every step we make, even if “shaping them is easier than keeping them in shape” (Bauman 2000: 8).

REFERENCES

- Active2010. 2007. Pedometer Challenge. <https://web.archive.org/web/20080711162853/www.active2010.ca/PedometerChallenge/challenge.cfm?> (accessed August 13, 2018).
- Active2010. 2008. A Summary of Behavioural Change. <https://web.archive.org/web/20080803173234/http://www.active2010.ca/toolkit/en/tools-revised%20toolkits/f-summary.htm> (accessed August 13, 2018).
- ActNow BC. 2006. Creating a Healthy Workplace Environment: Workbook and Toolkit. www.healthyworkenvironments.ca/_literature_163470/Creating_a_Healthy_Work (accessed August 13, 2018).
- ActNow BC. 2007. *ActNow BC-Every Move is a Good Move: A Whole of Government Approach*. <https://web.archive.org/web/20170917043556/https://lin.ca/sites/default/files/attachments/2007SymposiumpresentationK.pdf> (accessed August 13, 2018).
- Association of Local Public Health Agencies (alPHA). 2014. Milestones and History. <https://alphaweb.site-ym.com/page/milestones> (accessed August 13, 2018).
- Bennett, Roger, Wendy Mousley, Paul Kitchin, and Rehnema Ali-Choudhury. 2007. Motivations for participating in charity-affiliated sporting events. *Journal of Customer Behaviour* 6(2): 155–178.
- BC Recreation and Parks Association (BCRPA). 2010. Step By Step A Workplace Walking Resource. http://www.walkbc.ca/sites/default/files/walkbc/step_by_step_a_workplace_walking_resource.pdf (accessed August 13, 2018).
- BCRPA. 2013. Walk BC, Pedometers. <http://web.archive.org/web/20140108154828/http://walkbc.ca/tools-resources/pedometers> (accessed August 13, 2018).
- Bauman, Zygmunt. 2000. *Liquid Modernity*. Malden, MA: Polity Press.
- Bauman, Zygmunt. 2005. *Work, Consumerism and the New Poor*. [Second Edition]. New York, NY: Open University Press.

- Canada NewsWire. 2005. "Ontario government introduces province wide walking campaign" *PR Newswire* 2005-06-1 <http://search.proquest.com/docview/453238555/6DA126790D0E457EPQ/1?accountid=6180> (accessed August 13, 2018).
- Cederström, Carl and André Spicer. 2015. *The Wellness Syndrome*. Malden, MA: Polity Press.
- Chan, Catherine B., Daniel Ryan, and Catrine Tudor-Lock. 2004. Health benefits of a pedometer-based physical activity intervention in sedentary workers. *Preventive Medicine* 39(6): 1215–1222.
- Cheney-Lippold, John. 2017. *We Are Data: Algorithms and the Making of our Digital Selves*. New York, NY: New York University Press.
- Craig, Cora L., Sue E. Cragg, Catrine Tudor-Locke, and Adrian Bauman. 2006. Proximal impact of "Canada on the Move": The relationship of campaign awareness to pedometer ownership and use. *Canadian Journal of Public Health / Revue Canadienne De Santé Publique*, 97: S21–S27.
- Foucault, Michel. 1997a. On the genealogy of ethics: An overview of work in progress. In *Michel Foucault Ethics, Subjectivity and Truth*, edited by P. Rabinow, 253–280. London: Penguin.
- Foucault, Michel. 1997b. The ethics of the concern of the self as a practice of freedom. In *Michel Foucault Ethics, Subjectivity and Truth*, edited by P. Rabinow, 281–302. London: Penguin.
- Foucault, Michel. 2007. *The Politics of Truth*. Los Angeles, CA: Semiotext(e).
- Hamblin, James. 2014. "The electricity-generating bicycle desk that would power the world" *The Atlantic* 2014-01-7 <http://www.theatlantic.com/health/archive/2014/01/the-electricity-generating-bicycle-desk-that-would-power-the-world/282692/> (accessed August 13, 2018).
- Horwitz, Jill R., Brenna D. Kelly, and John E. DiNardo. 2013. Wellness incentives in the workplace: Cost savings through cost shifting to unhealthy workers. *Health Affairs* 32(3): 468–476.
- Kelly, Peter. 2013. *The Self as Enterprise*. Burlington, VT: Gower Publishing.
- Kelly, Peter, Steven Allender, and Derek Colquhoun. 2007. New work ethics?: The corporate athlete's back end index and organizational performance. *Organization* 14(2): 267–285.
- Lupton, Deborah. 2012. M-health and health promotion: The digital cyborg and surveillance society. *Social Theory & Health* 10: 229–244.
- Lupton, Deborah. 2013. Digitized Health Promotion: Personal Responsibility for Health in the Web 2.0 Era. *Sydney Health and Society Group Working Paper No. 5*. Sydney: Sydney Health and Society Group.
- Lupton, Deborah. 2014. Self-tracking modes: Reflexive self-monitoring and data practices. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2483549 (accessed August 13, 2018).

- Lupton, Deborah. 2016. *The Quantified Self*. Malden, MA: Polity Press.
- McMaster. 2013. Guiding Principles. http://www.workingatmcmaster.ca/med/document/Guiding-Principles_Healthy-Workplace-Committee-1-37.pdf (accessed August 13, 2018).
- McMaster. 2015. Non Step Conversion Tool. <http://www.workingatmcmaster.ca/med/document/Non-Step-Conversion-Tool-1-37.pdf> (accessed August 13, 2018).
- McMaster. 2016. Wellness for McMaster faculty and staff. <http://www.workingatmcmaster.ca/healthy-workplace/index.php> (accessed August 13, 2018).
- Ministry of Health Promotion. 2004. Ontario Sport Action Plan – Stakeholder Consultations. <https://web.archive.org/web/20050221135716/http://www.active2010.ca/Documents/Consultations.pdf> (accessed August 13, 2018).
- Ministry of Health Promotion. 2005. Active 2010: Ontario’s Sport and Physical Activity Strategy. <https://web.archive.org/web/20060214102747/http://www.active2010.ca/Documents/active2010-strategy-f.pdf> (accessed August 13, 2018).
- Ministry of Health Promotion. 2005. Go the Extra Mile! http://web.archive.org/web/20110112115153/http://www.mhp.gov.on.ca:80/en/healthy-ontario/images/1011555P-MOHP_Pedometer_Brochure_ENG.PDF (accessed August 13, 2018).
- Morris, Felicity, and Precilla Choi. 2005. Changing physical activity and exercise patterns. In *Behavioural Change: An Evidence-based Handbook for Social and Public Health*, edited by C. J. Browning and S. A. Thomas, 115–149. Toronto: Elsevier.
- Neff, Gina and Dawn Nafus. 2016. *Self-Tracking*. Cambridge, MA: MIT Press.
- Nettleton, Sarah, and Michael Hardey. 2006. Running away with health: The urban marathon and the construction of ‘charitable bodies’. *Health* 10(4): 441–460.
- Ontario Workplace Coalition. 2013. Proposal for an Ontario Comprehensive Workplace Health Strategy. http://www.owhc.ca/pdf/Proposal_for_Ontario_Comprehensive_Strategy_31Oct2013_-_Revised_TOC.pdf (accessed August 13, 2018).
- Osborne, Thomas. 2004. On mediators: Intellectuals and the ideas trade in the knowledge society. *Economy and Society* 33(4): 430–447.
- Public Health Agency of Canada. 2009. Mobilizing Intersectoral Action to Promote Health: The Case of ActNow BC in British Columbia, Canada. <http://publications.gc.ca/site/eng/9.675129/publication.html> (accessed August 13, 2018).
- Public Health Agency of Canada and Canadian Council for Health and Active Living at Work (CCHALW). 2007. The Business Case for Active Liv-

- ing at Work. <https://slideplayer.com/slide/4242421/> (accessed August 13, 2018).
- Rose, Nikolas. 1999. *Powers of Freedom: Reframing Political Thought*. New York, NY: Cambridge University Press.
- Ruckenstein, Minna. 2014. Visualized and interacted life: Personal analytics and engagements with data doubles. *Societies* 4: 68–84.
- Schüll, Natasha Dow. 2016. Data for life: Wearable technology and the design of self-care. *BioSocieties* 11(3): 317–333.
- Sparks, Michael. 2013. The changing contexts of health promotion. *Health Promotion International* 28(2): 153–156.
- Swan, Melanie. 2012. Health 2050: The realization of personalized medicine through crowdsourcing, the quantified self, and the participatory biocitizen. *Journal of Personalized Medicine* 2: 93–118.
- Terranova, Tiziana. 2000. Free labor: Producing culture for the digital economy. *Social Text* 18(2): 33–58.
- The Graham Lowe Group Inc. 2006. Creating Healthy Health Care Workplaces in British Columbia: Evidence for Action. [http://www.bccdc.ca/pop-public-health/Documents/Creating%20Healthy%20Health%20Care%20Workplaces%20in%20BC-Evidence%20for%20Action%20\(2006\).pdf](http://www.bccdc.ca/pop-public-health/Documents/Creating%20Healthy%20Health%20Care%20Workplaces%20in%20BC-Evidence%20for%20Action%20(2006).pdf) (accessed August 13, 2018).
- The Graham Lowe Group Inc. 2007. A Coordinated Action Agenda for Healthy Workplaces. http://grahamlowe.ca/wp-content/uploads/import_docs/CHWC%20policy%20and%20evidence%20for%20action%20Oct%2007.pdf (accessed August 13, 2018).
- Till, Christopher. 2014. Exercise as labour: Quantified self and the transformation of exercise into labour. *Societies* 4(3): 446–462.
- UBC. 2014a. Wellness Wheel. <http://educ-walk2013.sites.olt.ubc.ca/fitness-info/wellness-wheel/wellnesswheel/> (accessed August 13, 2018).
- UBC. 2014b. Step Equivalence of Various Physical Activities. <http://educ-walk2013.sites.olt.ubc.ca/step-equivlents-of-various-physical-activities/> (accessed August 13, 2018).
- UBC. 2014c. Goal Setting. <http://educ-walk2013.sites.olt.ubc.ca/fitness-info/goal-setting/> (accessed August 13, 2018).
- UBC. 2015. Walkabout: 2015 Teams. <http://walkabout.educ.ubc.ca/walkabout-history/images/2015-teams/> (accessed August 13, 2018).
- UBC. 2016a. The 10th Annual Walkabout: Closing Ceremony. <http://educ-walk.sites.olt.ubc.ca/files/2013/11/2016-Walkabout-Closing-Ceremonies-compressed.pdf> (accessed August 13, 2018).
- UBC. 2016b. Walkabout 101. <http://walkabout.educ.ubc.ca/teams/> (accessed August 13, 2018).

Van Den Eede, Yoni. 2015. Tracing the tracker: A postphenomenological inquiry into self-tracking technologies. In *Postphenomenological Investigations: Essays on Human–Technology Relations*, edited by R. Rosenberger and P.-P. Verbeek, 143–210. New York, NY: Lexington Books.

Zamosky, Lisa. 2014. Digital Health Tools Are a Growing Part of Workplace Wellness Programs. <https://www.johnsondugan.com/digital-health-tools-are-a-growing-part-of-workplace-wellness-programs-ca-employee-benefits/> (accessed August 13, 2018).

Steven Richardson is a PhD Candidate in the Department of Sociology at Queen’s University. His research focuses on the development and adoption of emerging technologies such as wearables – particularly, the push and pull of users’ own contributions to the design and development of these technologies.

Email: 14sr1@queensu.ca

Debra Mackinnon is a PhD Candidate in the Surveillance Studies Centre at Queen’s University. Her current work focuses on the adoption and mobility of public-private surveillance networks in Canadian cities.

Email: 14dmm3@queensu.ca

Steven and Debra also authored the report *Left to their own Devices? Privacy Implications of Wearables in Canadian Workplaces*, which was published by the Canadian Office of the Privacy Commissioner.

