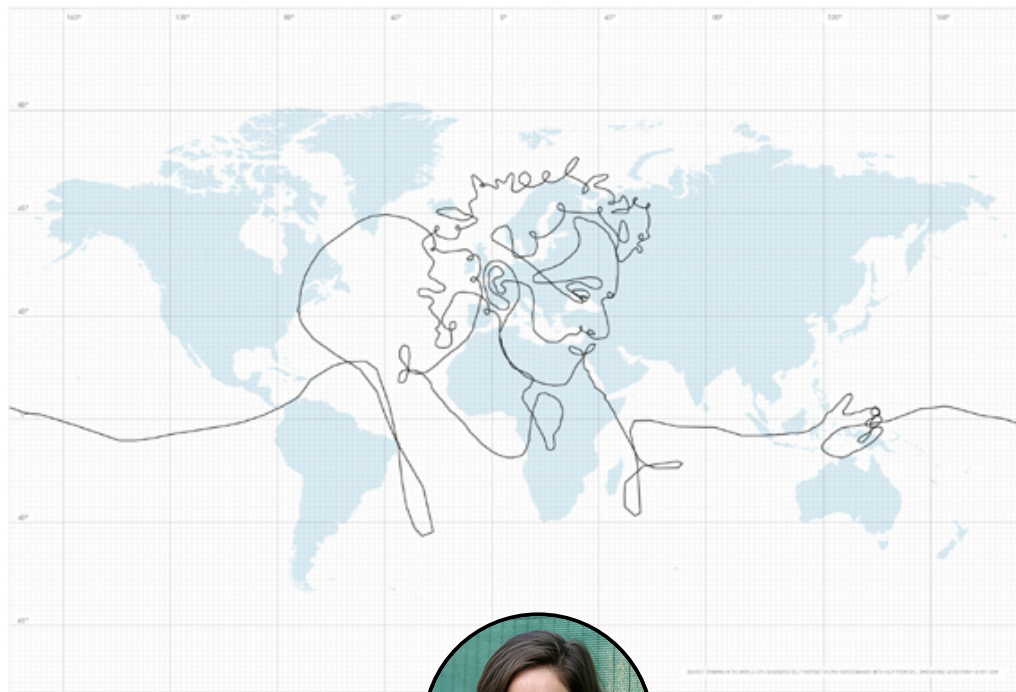
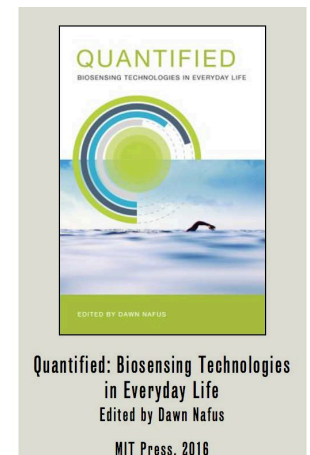
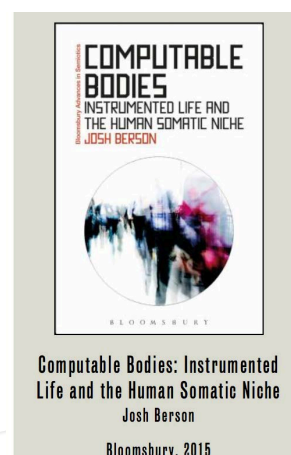
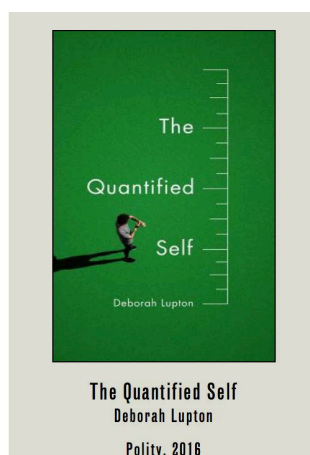
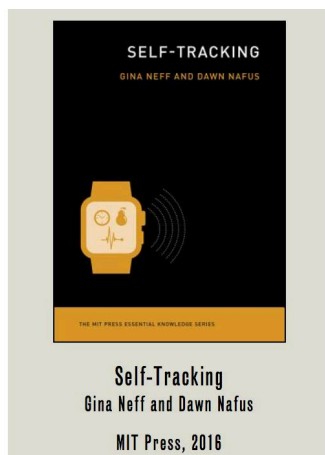


OUR METRICS, OURSELVES

1.26.2017



BY NATASHA DOW SCHÜLL



In 1994, a doctor named Clifton Meador penned a satirical portrait of “the last well person” for the *New England Journal of Medicine*. The protagonist, bent on discovering every datum of unwellness lurking in his body, relentlessly monitors all manner of physiological levels, tests his stress, screens for a range of conditions, tracks his time, exercises daily, and methodically controls his diet and living environment. Today, portraits like this one—only, nonfictional and unironic—are common fare in the mainstream media. While we might poke fun at these self-trackers, we ought to take seriously their mode of living; for better or worse, data monitoring has become a pervasive feature of daily life, dissolving and redrawing the line between body and environment, sensation and knowledge, self and other.

Propelling the rise of so-called personal informatics has been the Quantified Self, an international collective whose members seek “self-knowledge through numbers.” Since its 2007 inception, the group has facilitated online forums and live meet-ups around the world in which quantified selfers share their experiments with diet, exercise, mood fluctuations, even relationship dynamics. In large volumes of self-data, often gathered through digital apps or wearable devices, they seek to detect patterns and shift habit pathways to increase the chances of personal flourishing.

Over the past five years, the ethos of self-quantification has migrated out of QS, capturing the attention of venture capitalists, technology startups, established electronics companies, and mass-market consumers. Even as heated public debate unfolds over how customer and citizen data tracking by governments and corporations might undermine personal identity, liberty, and privacy, consumers have embraced practices and products of self-tracking: downloading tracking apps to their smartphones and dressing their bodies with pendants and wristbands whose sensors log footsteps, heart rates, sleep phases, and more. The contemporary world is characterized by a “new intimacy of surveillance” that encompasses “patterns of data generation we impose on ourselves,” writes the anthropologist Josh Bersoff in *Computable Bodies*.

Joining *Computable Bodies* to form a cluster of new books by social scientists on the self-tracking phenomenon are *The Quantified Self* by the sociologist Deborah Lupton, *Self-Tracking* by the anthropologists Gina Neff and Dawn Nafus, and *Quantified*, a collection of articles edited by Nafus.

For all their differences, the books share a set of premises: first, that people

have always tracked and quantified themselves but now do so more than ever, due in large part to advances in sensor technology, data-analytical algorithms, and cloud computing capacities; second, that it is important to remain as attentive to the promise of self-tracking as to its pitfalls; and third, that social scientists have valuable insights and perspectives to contribute to collective conversation over citizenship in our datafied world: what subject position allows us to ethically occupy, flourish, and move in a world of pervasive data monitoring?

The most recent of the four books reviewed here, Neff and Nafus's *Self-Tracking*, appears in MIT's Essential Knowledge series, which comprises "accessible, concise, pocket-sized books on topics of current interest" such as cloud computing, neuroplasticity, memes, metadata, paradox, and free will. That self-tracking warrants inclusion in this zeitgeisty ensemble attests to its salience in modern life. "Today," concludes the book's jacket copy, "no one can lead an entirely untracked life."

Keeping with the slim, primer-like format of the series, the authors present an introductory account of self-tracking, covering its far-reaching incursions into everyday life and the public debates and critiques that have sprung up around it. They also survey the various tracking methods readers might apply in their own lives, identifying "five common styles" of tracking (monitoring and evaluating; eliciting sensations; fulfilling aesthetic curiosity; debugging a problem; cultivating a habit) and offering examples and tips "to enable you to try these things out for yourself."

The switching between critical and practical narrative modes can be disorienting—as when Neff and Nafus abandon the stance of rigorous skepticism they maintain toward the norms and nudges built into tracking systems to uncritically endorse the application of pop-psychological habit-hacking techniques such as B. J. Fogg's "tiny habits," Charles Duhigg's cue changing, and the behavioral economic strategy of betting on one's own behavior to incentivize change. Yet there is much to admire in their attempt to combine how-to advice with cultural and sociological insights. While more traditionally scholarly writing on self-tracking leaves readers to wonder, as they learn about and reflect upon the political and social dimensions of tracking practices and technologies, how they might track themselves should they wish to do so, this book equips them with the tools to experiment.

Of chief importance in this experimentation, Neff and Nafus argue, is to cultivate data literacy, data vigilance, and data ownership—by increasing our awareness of data; ensuring our access to it; protecting ourselves against those who would use it unethically; making informed choices about whether to give it over to aggregate research; and constantly questioning norms and ideals that may be designed into the tracking systems that collect it. “Is the technology you are being asked to use really going to improve your health, or is it shifting the administrative or healthcare labor on to you? If you are using it voluntarily, does it help you make sense of the situation, or does the rich data just go off to someone else while you get an unhelpful number?” Even as they reject the empowerment claims of big-data pundits, they neither reject self-tracking as a practice nor empowerment as a goal, as their parting words make clear: “We think a future of self-tracking that supports people asking and answering their own questions with their own data is a future worth fighting for.”

**WHAT SUBJECT POSITION ALLOWS
US TO ETHICALLY OCCUPY,
FLOURISH, AND MOVE IN A WORLD
OF PERVASIVE DATA MONITORING?**

Although the title, *Self-Tracking*, brings to mind everything from Twitter-feed metrics to personal banking software and digital pedometers, Neff and Nafus are specifically concerned with “wellness and health, for that is the sort of data people tend to care most deeply about, and where the debates about the social implications are the most intense.” They tell a story of the spread of self-tracking beyond uppercase Quantified Self, with its antiauthoritarian, self-experimental attitude, to lowercase quantified self, as seen in a gamut of novel technologies and practices that extend across personal, clinical, and medical research domains. These domains include remote healthcare monitoring and telemedicine systems, sensor-based wearable and implantable devices, the use of social media to interact with fellow patients and/or doctors, direct-to-consumer genomic sequencing, and public health interventions based on big data.

To the authors’ credit, they do not dilute their story by straying too far off the

path of “this extensive process of biomedicalization.” One wonders, however, how their account would have differed had their empirical and analytical commitments not hewn so closely to the medical. What if financialization had been the conceptual lens through which to consider self-tracking? After all, many of the tactics Neff and Nafus cover—allocating oneself gold stars, staking cash on habit change, translating behavioral patterns into pie charts or Excel spreadsheets, and other methods for “being your own CEO”—are the latest in a long line of financial accounting and management systems applied to bodies and selves, from clocks to weighing scales and household budgets. “Factories perhaps were the first place where people’s activities were quantified at scale,” the authors themselves observe, “with workers clocking in and out and management practices that measured minute details of time and motion to optimize the productivity of workers’ every gesture.”

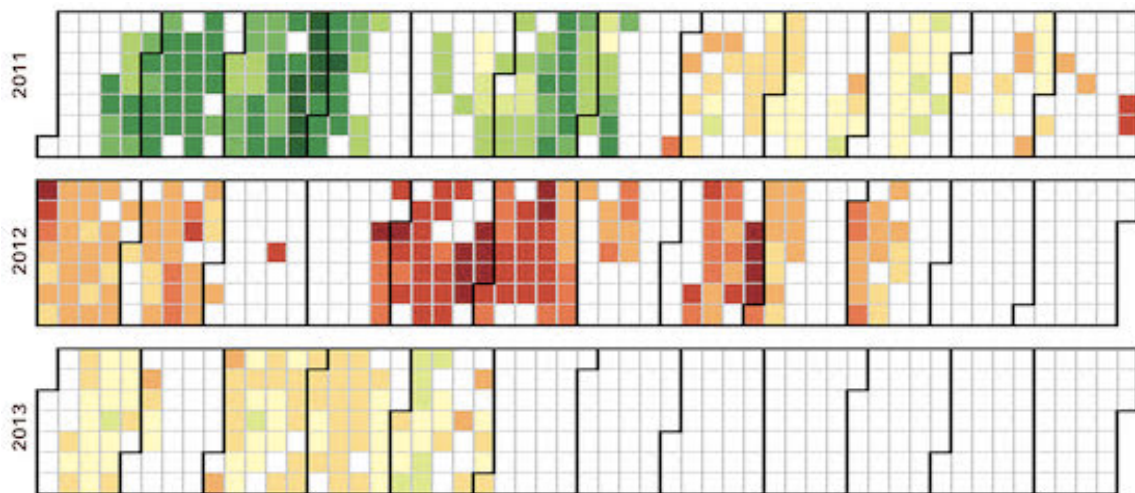
Today, when employees monitor their own physiological variables to adjust workflow and schedule breaks, are we witnessing the biomedicalization of the workplace or, more broadly, the continuing regulation of bodies by the imperatives of capital accumulation? Arguably, the same productivity engine driving the monetization of industrial laborers’ bodies inspires the quarterly reports, game points, and personal ratings of contemporary wellness schemes, disclosing an economic undercurrent that runs even deeper than the biomedical in self-tracking phenomena.

Those seeking a wider-angle view of self-tracking might turn next to Lupton’s *The Quantified Self*. Where Neff and Nafus funnel into the sphere of health and wellness from the starting point of the self-datafication trend, Lupton moves outward. She, too, presents her book as a primer of sorts: a state-of-the-field mapping that follows self-tracking as it wends its way through diverse domains of everyday life—from exercise to banking, sexual relations to corporate wellness programs.

At the outset, Lupton helpfully clarifies that she will approach quantified self as “an ethos and apparatus of practices” rather than limiting herself to the particular realm of the Quantified Self community. Using discourse analysis, she monitors the diffusive adventures of such terms as “self-tracking” and “quantified self” through app and product reviews; news and industry reports; white paper and market reports; social media and blog discussions; and literature on human-computer

interaction. Even those who do not take kindly to the monitoring of Google trends, alerts, advertising rhetoric, blog posts, online lexical searches, or Twitter hashtags as a method of social argumentation must admit, after Lupton has finished cataloguing the robust diffusion of the term “quantified,” that a veritable cultural phenomenon is afoot. Compounding readers’ sense of a shift, she concludes her first chapter with an exhaustive compendium of contemporary self-tracking tools—from digital pedometers for fitness to GPS anklets for parolees, meditation apps to genetic profiling.

Lupton goes on to review the analytical tools scholars might employ as compasses in their travels through the landscape of self-tracking culture: sociomaterialist approaches, actor-network theory, neoliberal politics, surveillance studies, and more. “Each perspective,” Lupton writes, “allows scholars to explore different angles on the context of self-tracking, and what approach is found most insightful will depend on the particular aspect of self-tracking they are analyzing.” The drawback to her crowded catalog of approaches is the lack of breathing space it leaves for reflecting on their differences and incompatibilities.



Mette Dyhrberg, “2.5 Years of My Weight.” Used with permission

Whether one considers personal data monitoring an example of panoptic surveillance and its fixed lines of sight, liquid surveillance and its fluid gaze, or *sousveillance* as a “watching from below” would seem to matter—yet readers new to these ideas will find little guidance in how to choose among them. In subsequent chapters, Lupton mixes and matches concepts and theories to explore themes of body and self, the meaning of personal data, and the political dimensions of data. The text is liberally peppered with the phrases “it can be,” “it may be,” and “it might be”—language likely to strike some readers as frustratingly noncommittal and

others as admirably tentative in the face of a phenomenon as yet too provisional to pin down; this reader found herself alternating between the two reactions.

Lupton's closing chapter returns readers to firmer ground, moving beyond interpretive speculation to lay out an original framework that parses the dizzying swirl of contemporary self-tracking phenomena into five modes—not only private, voluntary self-tracking but also exploited (as in the harvesting and brokering of data for commercial purposes), pushed (as in the promise of lowered insurance premiums or reward points for those who track), imposed (as in enforced geo-location tracking for parolees), and communal (as in the use of data from personal monitoring devices to track pollution). Lupton's typology does more than categorical work, for any attempt to tag a given instance of tracking invariably reveals the “intersections and recursive relationships between all of these self-tracking modes.” In this sense, the typology serves as the key to the map of datafied life she has drawn, illuminating the back roads and connector paths that crisscross among self-quantification discourse, data-tracking technologies and practices, bodies, selves, and politics.

When it comes to recommending how subjects should orient themselves to this datafied world, Lupton's zigzagging trajectory converges with the focused pathway of Neff and Nafus. She, too, concludes that an ethically viable self-tracking future rests on a foundation of autonomous decision-making. “While people can no longer escape being the subjects of dataveillance,” she observes in closing, “they can to some extent make choices about the self-tracking practices in which they engage and about the devices they decide to use”; they can also “challenge or resist dominant norms” and “configure new norms of selfhood and embodiment.” These possibilities, however, rest on a certain kind of subject—one who oddly doubles the stance of the “self-responsible actor” she detects in conventional tracking culture.

It is not that Lupton or Neff and Nafus abandon nuance in their introductions to contemporary self-tracking. Lupton is wary of the “autonomous individualism” that diminishes the relational potential of self-tracking, just as Neff and Nafus worry over “a preoccupation with the personal that erodes our capacity for coordinated community action.” Both books laud the use of personal monitoring devices and data for artistic or activist purposes—as in the pooling of individual data to register communal discontent, the practice of citizen science, and other examples of the

move toward a Quantified We. Yet rather than pursue these creative repurposings in potentially radical directions, both end by taking a more conservative, well-traveled turn, recommending that readers counteract the forces of datafication that destabilize their autonomy by shoring up their knowledge and their individual rights.

The problem with this formula for political subjectivity is that it risks its own normativity, mapping rather too neatly onto the template for consumer sovereignty that is so critical to the workings of capitalism today. Is it possible to go beyond this template, asking not how subjects should shore up their self-sovereignty against the forces of datafication but, rather, what datafication and its effects might reveal about the inadequacy of sovereignty as a viable subject position in a datafied world? The final two books in this review set us on this path, exploring how scholars might bridge the private, bounded domain of the individual self and the open field of collective tracking; the *n-of-1* self-experimental ethos and the search for social solutions to the predicaments of the day.



Rachel Kalmar, data scientist, community organizer, and world record holder for number of wearable sensors worn continuously. Photograph by the author

While Neff and Nafus begin their book with a broken kneecap (Nafus's) that

inspired both a painkiller-tracking regimen and a deeper understanding of the value of personal data monitoring, Berson begins *Computable Bodies* with a broken foot (his own) that “provoked a deep uncertainty about who I was and how I manifested in the world.” This point of existential uncertainty launches him on a line of questioning that traverses the intimate, layered terrain of somatic experience, resulting in an account at once more theoretical and more grounded than the others under review. A practicing self-tracker trained in cultural and linguistic anthropology, Berson regards the body as fundamentally social, its habits of posture, sleep, and speech reflecting “an ensemble of unconscious expectancies.” He is interested in understanding “what happens to our bodily experience of the world as we become *instrumented*, that is, as we start to attach sensors to our bodies and our environment that generate time series data about our physiology and behavior.”

For Berson, data are not disembodied reductions of human experience but “encodings of palpable impressions of change, difference, or variation” that, no matter how mediated, “exist by virtue of their availability to our senses.” As bodily experience is increasingly folded into data and that data shapes experience in turn, there is “a softening of the boundary between sensing from without and sensing from within, a softening of the interface between body and world.” This softening interface, he argues, is a facet of the ambient milieu to be at once reckoned with and embraced.

In Berson’s account, politics do not impinge upon bodies or unfold outside their boundaries; politics are immanent in bodily rhythms, movements, and sensory attunements—and in this sense bodies are more than embattled sites for the resistance, obfuscation, or rejection of politics. “Taking instrumentation seriously,” he writes, “will lead us ... back to an emancipatory critique of surveillance, but one better prepared to say why we should be unnerved, and excited, by the proliferation of instruments of self-tracking—and by the social mobilizations that have formed around them.”

The question to ask, Berson proposes, is not “How should we as individuals respond to the novel pressures of instrumentation?” but, instead, “How might we use instrumentation to expand the circle of those who feel at home in their skin?” He pursues this question via ethnographic attention to the ways in which people modify their own and each other’s environments, an ecological frame that allows him to “unwork instrumentation’s opacity and imagine ways it might be other than it is—more inclusive, less reductive, more just.”

WHAT MIGHT DATAFICATION AND ITS EFFECTS REVEAL ABOUT THE INADEQUACY OF SOVEREIGNTY AS A VIABLE SUBJECT POSITION IN A DATAFIED WORLD?

These words resonate in the epilogue to *Quantified*, a collection of 12 essays edited by Nafus, where she writes of the need to “open up a more relational view that allows new categories and communities to flourish, perhaps more equitably than those which came before.” Complimenting Berson’s focus on the instrumentation of the sensing body, the volume addresses instrumentation itself. Nafus explains: “Focusing on biosensing foregrounds the sensors, and therefore the very physical link back to what is being sensed.”

The book, in which the voices of social scientists mingle with those of technology entrepreneurs, policy experts, and self-trackers, reads more like a curated dialogue than a set of discrete academic pieces. As Nafus observes in the introduction, a number of chapters are committed to the idea that data tracking can play as much of a role in dissolving boundaries between body and environment (or self and community) as in creating them. Dana Greenfield, a medical student and anthropologist, shows that the seemingly individualistic self-tracking ethos of *n-of-1* can serve multiple goals—from personal aspiration to mindfulness, DIY health to participatory medicine, public health to citizen science. The sociologist Alex Taylor recounts his experiment with data generated by the cycle routes of London, showing how it serves at once “to cement the same old subject categories” and to reimagine “the places we live in and how we live together.”

While some of the contributors to *Quantified* confirm the “take back control” message articulated in the first two books reviewed here, others complicate the idea that political agency rests on an autonomous self. Anthropologist Sophie Day and sociologist Celia Lury together challenge the idea that, as Nafus explains, “there is such a thing as an individual with clear boundaries, such that we can then also sensibly draw fixed rings around what is public and what is private.” To imagine that data is “outside” and a citizen is “inside” is misguided, agree the science and

technology scholars Geoffrey Bowker and Judith Gregory in their piece on personal genomics. They close out the volume by proposing that to “construct a viable ethics for our brave new world” we focus not on citizens or on data but on “data citizens” and their ecologies.

Considered together, the distinct trajectories these four books draw through the landscape of datafied life suggest that today’s self-quantification practices and technologies have no fixed agenda or definitive subject position. In some cases they support the kind of entrepreneurial self-optimization and enhancement that Lupton sees at the heart of self-tracking; in other cases they serve the ends of social justice, bring about environmental awareness, or catch people in obsessive loops. In my own research I find that most self-trackers—including designers of tracking technology—engage these tools with some ambivalence, admitting a wish both to take charge of themselves and to delegate that task, burdensome and confounding as it is, to data technology; they speak of feeling cared for by the automated interventions of their devices and released from hard-to-meet demands for self-regulation. Instead of treating these instances as lapses in agency, we might take them as rich clues and an immanent critique of the models for agency currently at our disposal to make sense of the increasingly mediated terms of contemporary life. ■

Featured image: Erik Nordenankar, *Biggest Drawing in the World* (2008). Allegedly produced by shipping a small package with a GPS locator around the world via DHL to geo-map a global self-portrait of the artist, the project was later revealed to be entirely fictional.

#BIOMEDICALIZATION #DATA #DESIGN #DIGITAL #FINANCIALIZATION #QUANTIFIED SELF #SELF-TRACKING #TECHNOLOGY

