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The Data-Based Self: Self-Quantification and the Data-Driven (Good) Life

> The reason you begin tracking your data is that you have some uncertainty about yourself that you believe the data can illuminate. It's about introspection, reflection, seeing patterns, and arriving at realizations about who you are and how you might change.
>
> —Eric Boyd, self-tracker

THE CAPACITY TO AMASS, STORE, AND ANALYZE DATA DRAWN FROM THE physiological, behavioral, and "geolocational" experience of individuals is growing at an exponential rate and spreading to an ever-wider range of social domains.[1] In the "datafication" (van Dijck 2014) of everyday life, big data enthusiasts see a new and important opportunity: to transform areas of life typically known through their qualitative aspects into quantitative variables that can be measured and mined for hidden correlations and patterns. Such data, they argue, promises to yield objective insights into and answers for individual and social problems, increase our rational and predictive power, and provide new forms of self-determination.

Yet many scholars are skeptical of these promises, highlighting the ways in which digital quantification technologies "permeate

and exert power on all manner of forms of life" (Iliadis and Russo 2016, 2). Those who base their criticisms in Michel Foucault's work on modern forms of power tend to approach datafication from one of two angles: some draw on Foucault's early conception of *disciplinary power* (1977), focusing on the insidious surveillance capacities of data-tracking technologies (Ruckenstein and Schüll 2017); others draw on his later conception of *biopolitics* (2010), focusing on the way that population metrics are mobilized to regulate society—and, in particular, how quantification serves a neoliberal governmental rationality that accelerates the withdrawal of the welfare state from citizens' lives (Ruckenstein and Schüll 2017).

Scholars working in a political-economic vein emphasize the "asymmetric relations between those who collect, store, and mine large quantities of data and those whom data collection targets" (Andrejevic 2014, 1673), as well as the ways quantification and algorithmic analysis alienate us from our own practical reasoning, intuition, and understanding of ourselves (Smith and Vonthethoff 2017). Selves are "sliced and diced into decontextualized parts, and bought and sold" (Neff and Nafus 2016, 62). Many invoke Deleuze's (1992) idea of a control society and the *dividual*—a subject divided into ever more granular bits so that it may be sorted into and tracked through multiple data sets with the aim of algorithmically steering its behavior (Ruckenstein and Schüll 2017).

Running through these varied criticisms is the claim that datafication decomposes the person: as this special issue suggests, we are becoming *persons without qualities.* Particular deployments of algorithms, artificial intelligence, and other technologies of quantification work against human agency and self-image, such that we are treated—and treat ourselves—as "uniform, averaged, smoothed out" (Davis and Scherz, this issue, 4). This essay does not run counter to this criticism so much as obliquely, seeking to explore a space between the poles of boosterism and readymade critique, entertaining the idea that data tracking and quantification might serve as aids to self-understanding and new forms of living.

A conceptual entry point is found in the distinction that Foucault drew between technologies of power, "which determine the conduct of individuals and submit them to certain ends or domination, an objectivizing of the subject," and "technologies of the self," through which individuals perform "operations on their own bodies and souls, thoughts, conduct, and way of being, so as to transform themselves in order to attain a certain state of happiness, purity, wisdom, perfection, or immortality" (1988, 18). The case of contemporary self-tracking, in which individuals monitor and make meaning of their own everyday "data exhaust" via sensor-laden devices, smartphone apps, data-visualization software, and analytical algorithms, provides an ethnographic entry point. The popular Fitbit wristband, which tracks daily steps, is just the best known of an ever-expanding array of devices and apps for monitoring productivity, mood states, and mundane aspects of life such as sitting, chewing, and even breathing (Schüll 2016b).

While self-tracking could certainly be characterized as self-surveillance, it lacks the punitive dimension of disciplinary technology. And, while it is true that device companies are invested in extracting value from consumers' tracked data, it is also true that individuals are invested in deriving a different sort of value from their own tracked and quantified self-data. Individuals collect and reflect upon their data intentionally, gathering information about themselves so as to learn new things and experiment with self-transformation. In this sense, data-tracking technologies provide a new inflection point for older technologies of the self.

The point, at least for some dedicated self-trackers, is to "arrive at realizations about who you are and how you might change," according to Eric Boyd, the user and designer of tracking devices referenced in this essay's epigraph.[22] With self-tracking, "You set up this kind of external person or version of yourself, an avatar or companion—or something." Echoing Foucault's (1997) characterization of ethics as "establishing a relationship of oneself with oneself," he continues, "You're ultimately setting up a framework by which you can establish *a relationship with yourself.*"

Exploring how self-tracking might serve as a technology of the self—as a means and a medium for self-understanding and creative transformation—allows for a richer understanding of datafication and its human dynamics. Grasping its ethical dimensions also opens up a more effective critique of its dangers and discontents. To explore these dimensions, my ethnographic window is the international community known as the Quantified Self.

SELF-KNOWLEDGE THROUGH NUMBERS

Luca Mascaro was the first of four lunchtime speakers on day one of the 2013 Quantified Self Conference in Amsterdam, delivering a talk entitled, "Me, Myself, and I: A Dream Tracking Tale." Sidestepping the Freudian-inflected approach to dreams as semantically rich caches containing clues to one's authentic self, he proposed that one could, instead, track elements such as "colors you dream in or themes you dream about, and correlate all these little bits to get a graph." One could then reflect on the graphically rendered bits so as to "identify moments of change or turn, and ask *why.*" Posing the question of *why* was, as Luca saw it, a vital moment of narration and meaning-making—a way to "sync" one's tracked bits with the "real world" by reflecting on the particular patterns that showed up in their graphing.

Luca began with a slide that summarized his data from 2012: *210 tracked dreams; 3.8 dreams each week; Saturday—dreamiest day; November—dreamiest month.* In the slides that followed, he gave further details, such as a bar chart indicating the frequency of emotions in his dreams, ranging from fear and sadness to joy and surprise. Surprise topped the chart, followed by fear. With regard to *who* showed up in his dreams, he reported the following:

I wasn't in the dream:	12 percent
I was in the dream:	6 percent
I was someone else:	5 percent
Part of me was in the dream:	5 percent
Undefined:	72 percent

In the dreams in which he appeared, Luca was the protagonist 61 percent of the time.

He understood this "structured data" approach to dreams as an alternative to the more typical "narrative information" approach, as it allowed him to pose a different set of questions about himself and, indeed, to understand himself differently in the first place—not so much as a deep well of hidden content but as a creature of cumulative bits that, when plotted together on a timeline, could reveal telling signals and patterns. It was not that narrative meaning dropped away in Luca's approach but that its ground shifted: meaning, as he understood it, lay in patterns that emerged over time, not waiting to be discovered in the cavernous recesses of a psyche to be traversed and plumbed.

Three more talks followed Luca's, including one about tracking happiness through an app, one about tracking Parkinson's symptoms, and one about tracking moments of the day using a randomly snapping camera. "These stories are models for self-expression using numbers," commented Gary Wolf, former editor of *Wired* magazine, at the close of the session.

In 2009, with Kevin Kelly (also a former *Wired* editor), Wolf cofounded Quantified Self (QS), a group of technologically adept, existentially inquisitive individuals who gather and reflect on what they might learn from data-gathering devices and analytical software about the mundane features and challenges of their day-to-day lives. Under the banner of "self-knowledge through numbers," meeting participants engage in a kind of "data sociality" (Ruckenstein and Schüll 2017), delivering short presentations on their experiments in data-tracking and inviting questions and feedback from other attendees. Though initially concentrated in the technology hub of the San Francisco Bay Area, QS quickly spread through social media to urban centers across North America and Europe.

Wolf put QS on the map with a 2010 cover story in the *New York Times Magazine*, "The Data-Driven Life." He acknowledged that tracking technologies could be put to disciplinary use by corporate or state

agents but stressed their potential alternative use as "digital mirrors," allowing people to see and learn new things about themselves. Echoing fans of big data, Wolf began with a familiar lament over the limits of human rationality, emphasizing our "blind spots," the frustrating "guesswork" we must undertake as we make decisions about how to live, and the need to get beyond the "vagaries of intuition." The way forward was to gather data—only in this case it was "small data" concerning the particular details of one's life. "Once you know the facts," he insisted, "you can live by them" (Wolf 2010).

Readers' responses to Wolf's proposal of a tracked life were largely negative, diagnosing a "loss of human-ness" in his prescriptions. They argued in various ways that an excessive emphasis on logging data about those aspects of oneself that can be measured degrades actual living, rendering the unquantifiable stuff of life as so much noise to be filtered out. The public had the same reaction to a number of journalistic profiles of extreme digital self-trackers that appeared between 2010 and 2013 in magazines such as *Forbes*, *Vanity Fair*, and even *Wired*. The articles themselves tended to portray their subjects as caricatures of technological boosterism and American individualism (Hesse 2008; Morga 2011; Bhatt 2013).

A particularly acerbic attack on the QS community came from the cultural critic Evgeny Morozov. "Self-trackers," he argued (2014, 261), "gain too much respect for the numbers and forget that other ways of telling the story—and generating action out of it—are possible." Elsewhere he elaborated,

> The QS movement essentially reduces everything to a single number and while you may learn how to adjust your behavior to that number, it doesn't necessarily translate into any holistic understanding of the self who is behaving. So in a sense the person becomes a kind of a black box with an input and an output, but the user himself has no idea how the input relates to the output. (Schüll 2013)

In Morozov's view, the movement was abandoning narrative imagina-
tion and reflexivity in favor of a soulless numerics, which he found
both dehumanizing and politically troubling. Quantification was
undermining the very qualitative features that made human life
worth living.

Academic critiques of self-tracking technologies over the past
decade rehearse many of the arguments appearing in these more pop-
ular sources, articulating them within the broader field of critique
around datafication recounted earlier, involving a focus on themes
of discipline, normalization, exploitation, neoliberal subjectification,
and dispossession. "Self-quantification algorithms" are said to "struc-
ture and shape possibilities for action" (Williamson 2015, 141); pos-
ture-correcting wearables "call users to attention" when slouching
is detected (Millington 2016, 414); developers and marketers of self-
tracking technology "design self-care" into their products in the form
of motivational feedback loops and "micronudges" that reinforce cer-
tain behaviors and discourage others (Schüll 2016b); self-trackers en-
act cultural values of entrepreneurial, autonomous behavior (Lupton
2013, 261). Social norms become embedded in tracking devices' tar-
get numbers, presentation of scores, and gamified incentives (Depper
and Howe 2017), such that a "numerical ontology" comes to suffuse
everyday practices and "the ways in which people relate to their own
bodies" (Oxlund 2012, 53). In the use of self-tracking devices, "bodily
intuition is being outsourced to, if not displaced by, the medium of
'unbodied' data" (Smith and Vonthethoff 2017, 7).

While these critiques are justified and important, few have
been based on sustained ethnography. If one considers self-tracking
from the vantage of those who practice it, a more complex picture
emerges, as a growing body of ethnographic work attests. Quantifica-
tion "rarely produces a definitive truth, a one-to-one representation
of one's life or one's identity" (Sharon 2017); instead, it involves a
"situated objectivity" (Pantzar and Ruckenstein 2017) in which cer-
tain prior experiences, understandings, and shared expectations
come to matter. One anthropologist has written of self-tracking as

an aesthetic practice in which bits of the self, extracted and abstracted, become material for differently seeing and experiencing the self (Sherman 2016). Looking at personal data charts and visualizations can trigger critical reflection and raise new questions to pursue; the data does not displace or freeze but rather enhances and enlivens self-narratives (Ruckenstein 2014, 80). In this sense, data serves as a kind of "transducer" that preserves only some qualities of the thing being measured such that "there is much room for people to maneuver in the imperfect translation" (Neff and Nafus 2016, 25).[3] Self-quantification "sets up a laboratory of the self " in which "devices and data contribute to new ways of seeing the self and shaping self-understanding and self-expression" (Kristensen and Ruckenstein 2018, 2).

In what follows, I extend this line of inquiry by drawing on scenes, conversations, and interviews that unfolded among participants at three international QS meetings (in 2013, 2015, and 2018). This fieldwork suggests that, for many engaged in self-quantification, the practice does serve as a technology of the self. At the same time, the questions of what kind of self is at stake in these practices, and how these practices relate to or depart from older technologies of the self rooted in language and narrativity, remain unsettled. Likewise, the questions of whether and how these practices might be mobilized in the service of communal and relational work remain open. QS, I show, is an arena for open-ended debate and experimentation that bears a far more complicated relationship to contemporary selfhood than most previous discussions have allowed.

COMPUTING ALL THE WAY IN

Gary Wolf opened the proceedings of the 2013 Quantified Self Conference by posing a framing question to guide presentations and discussion: *What, exactly, is a quantified self?* It was easy enough to understand that "quantification" involved gathering, measuring, and computing data about oneself—but "self" was a more ambiguous term. What happens to the self when we quantify it—when, as Wolf put it, "computing comes all the way in"? Or, as one of the session

facilitators asked later that afternoon in a breakout session on the topic of data and identity: *What does it mean to have a digital, numerical, binary representation of myself? What is my relationship to that data—what does it mean to be a human interacting with a digital binary thing that is data?*

The question provoked a spirited exchange. "Maybe tracking is like *sketching* yourself," suggested one participant. "You have to fill in the details, it's a kind of self-portrait, an art." A self-tracker named Robin remarked that he had once characterized his tracking as a kind of "digital mirror" (similar to how Wolf had described it in the *Times*) but now felt that metaphor to be inadequate "because mirrors represent a whole, projected image—which is not what we get from our data bits." He had come to prefer the more creative metaphor of self-portraiture: "What we're doing when we track and plot our data is focusing in on one part of our lives and slowly building up that portrait as we collect data on it." The session moderator pressed the group to further specify the metaphor. "I think it would have to be an algorithmic mosaic, with shifting composition, color, and patterns," Robin suggested, "and the portrait is ever-changing." "It's continuous," agreed Joshua, a venture capitalist and tracking enthusiast from California. "We are all continuously selfing—at all times we have to make decisions about what to take as relevant points."

One participant suggested that self-trackers understand their relationship to data in narrative terms: "We make stories about ourselves from the data, to make sense of our lives." Others rejected the subjective sense of the term narration, wanting to preserve the idea that quantitative data could express an objective truth: data was not some "made up" story; if anything, QS *denarrativized* the self. Robin, however, ventured that one could construct a story out of objective data that preserved rather than distorted its truth and that this was precisely the value of self-quantification. "Tracking isn't additive—it's *subtractive*," he told the group. "You work on some question about yourself in relation to this machine-produced thing [data] and, afterward, you're left with a narrower range of attributions you can make about your behavior or your feelings." The narrative lay in the whit-

tling down of possible attributions, the elimination of uncertainty, and the gaining of "a new perspective."

Joshua agreed that the conversion of qualitative into quantitative could help one to escape certain impasses: "The self can be very overwhelming as an integrated, whole thing. By doing QS, you can *disaggregate* various aspects of self, work on just those aspects, maybe let them go, put them back in … It takes an incredible burden off you when you can take these small slices out and say, *all that other stuff is complicated, let's just look at this.*" This extractive, subtractive process was a form of self-narration, he concluded, and we should call it "quantitative autobiography."

Joerg, a German activist with a background in business and philosophy, raised the risk of self-*un*making—that "if you start breaking yourself down piece by piece, it could lead to non-self, disaggregation, seeing ourselves as a big stream of data." But Robin thought not: "If self-quantification, breaking ourselves down into bits, enables us to create new experiences of ourselves, then those experiences are gateways to *new degrees of freedom* in how to act." Enacting a quantified self, he suggested, "allows you to imagine new types of self and move in new directions; you are no longer trapped in a limited set of pathways."

Satisfied with this take on things, Joerg suggested that "narrative" should be specified as it pertained to self-quantification: "Numeric expressions of ourselves are inherently *syntactic*, not *semantic*." Recalling Luca's earlier presentation on the use of "structured data" rather than "narrative information" to reveal patterns in dreams, he suggested that the power of self-data lay in the relationships that emerged across its data points—not in the authorial intentions of "transcendent phenomenal selves" storying themselves forth. His position at once echoed and countered Morozov's criticism of self-quantification: yes, it departed from traditional humanist modes of narrative—but that did not make it *dehumanizing*; rather, it was vital, enlivening. Quantification, viewed from this vantage, is not a way to ignore, sidestep, or postpone what is difficult or obscure, but a way to confront it from another angle and relate to it creatively.

This angle is consistently voiced by "QSers" as outward- rather than inward-oriented, as forward and backwards looking rather than a vertical gaze into oneself. "When we quantify ourselves, there isn't the imperative to see through our daily existence into a truth buried at a deeper level," Wolf wrote in his 2010 essay. "Quantified self is not a linguistic exploration like psychoanalysis," commented Eric, one of the participants in the session recounted above, when I spoke to him some months later at a meeting in Canada. "It's a digital exploration, and the stuff you're exploring is made up of many little bits and moments." More like the self-accounting graphics of Jesuits than confessional technologies,[4] the discrete bits that QSers collect cumulatively register their habits and tendencies; the true "stuff" of the self is revealed in the accretion of these bits. In archived sequences and sums of bitified life, QSers seek to bring to awareness the lived syntax—the patterns and rhythms that define their existence and that might, without digital tools, remain uncertain forces below the threshold of perception.

While admitting machine forms of intelligence into human ways of defining, categorizing, and knowing life risks the loss of human autonomy, QSers recognize that it also carries the possibility for new human agencies (Kristensen and Ruckenstein 2018; Kennedy, Poell, and van Dijck 2015). The science and technology pundit Melanie Swan (2013, 95) proposes that big-data epistemologies, transposed to the scale of the individual, afford "a sort of fourth-person perspective" on the self and, ultimately, a new kind of truth—one that is "not possible with ordinary senses." This truth does not correspond to a classical phenomenological self grounded in time and space but to a "database self" that extends over time (Schüll 2016a and 2016b).

EMPOWERMENT METRICS

Jordan, an African American student at a major research university in the Northeast corridor, delivered his presentation at the 2018 Quantified Self summit in Oregon wearing a T-shirt printed with the words "Data for Black Lives." He was studying data science in a master's

program and had assembled a variety of social media and smart phone apps to track and quantify the microaggressions he experienced in his daily life, which he defined as "small, subtle forms of bias that often go unnoticed." Difficult to identify and riddled with the uncertainties of subjective experience, microaggressions were ideal candidates for a QS-style tracking project—that is, one designed to render visible and tangible what is otherwise hard to pinpoint or define. Yet Jordan's project, which he conceived as a means for emotional regulation as well as social justice, departed from the typical QS-formula in the way that it wed personal to political aims.

Reasoning that the effects of microaggressions would show up as disruptions to his sleep, productivity, and other physiological measures, Jordan had put in place a system to establish his baseline patterns, document deviations, and provide him with data to correlate with negative events and situations in his life. A key component was Welltory, an app that used his smartphone's camera sensor to measure his heart rate variability. Another was Bitesmap, which involved photographing the food he was eating (an index not only of nutrition but also of his financial stresses, as seen in one low-budget meal of grits and peanut butter). He also used a mood-tracking app, diverse self-scoring metrics for a number of criteria, and Gyroscope, a "correlation engine" into which all these bodies of data fed so that he could consider them in relation to the others. Jordan regarded this system as an opportunity to surface events and experiences "that seem very small to other people but are very magnified for me."

A critical aspect of Jordan's tracking project was to communicate these magnified effects to others via social media, evoking the face-to-face conversations and epistolary correspondence that played such a critical role in the ethical self-work of Greco-Roman citizens. In Greek practice, offering commentary on others' self-reports was as important as receiving it. "The opinions that one gives to others in a pressing situation," wrote Foucault, "are a way of preparing oneself for a similar eventuality … [it is] a matter of bringing into congruence the gaze of the other and that gaze which one aims at oneself when

one measures one's everyday actions according to the rules of a technique of living" (1997, 221). Social media, as Jordan saw it, facilitated a similar space for communal exchange and accountability. Posting real-time accounts of micro- (and macro-) aggressions bestowed a sense of agency on a number of registers. For one, by publishing the experiences on Twitter, Facebook, or Instagram, "I can take a picture of it, add context and post it as a way to delete or get out my feelings; I can use social media to emotionally regulate." The act of posting rerouted and clarified the muddy flow of his internal experience.

Publicly posting his experiences also gave Jordan a palpable sense of action and efficacy: "No one can control what I write, and by practicing that freedom I feel less trapped in the situation." He displayed for the audience a set of tweets he had composed when a financial officer questioned his status as a student and called the campus police. "Why should I have to explain to a campus officer that I am a student here?" he had asked his Twitter feed as this was happening. Documenting microaggressions "makes me feel both protected and accomplished because I am producing evidence that will exist into the future."

Jordan noted that his capacity for "future presence"—that is, his ability to reflect on events unfolding in the present from a projected future position—grew out of traumatic experiences but now served as a technique for gaining distance from otherwise unbearable or enraging situations. "Sometimes I can't live in 2019, so I go into the future, a future that is changed. This ability to time travel allows me to visualize change in myself and in the world, which is why I think of it as a superpower."

He observed that the sense of agency he gained from his social media documentation extended beyond the timeframe of any given event, since "I'm not walking around with it after it's been posted—it's out into the world for others to carry as well." Should he wish to, he could reflect on his past accounts—bodies of "evidence," as he characterized them—but they would not eat at him from the inside. Externalizing his inner experience in the form of social media posts

restored to his life a sense of agency and the necessary bandwidth to sleep, work, and live free of excess tension.

Beyond a personal coping mechanism, Jordan's recording and broadcasting of microaggressions, annotated with context, time, and language, were a source for collective reckoning. While at the individual level the process helped him to weather otherwise draining emotions around institutional bias and those who perpetrated it, at the social level it lay the groundwork for others to see the effects of their actions in tangible, contextual terms, so that they might react less defensively. Without context, he pointed out, microaggressions could provoke a response characterized by the aggressed as appropriate and at the same time by the aggressor as irrational and disproportionate. Documented context allowed recognition and empathy to follow. His aim was "to create a data trail so people understand where I am coming from, and how I am affected."

What sparked Jordan to develop his system of tracking and posting, he told me several months later in a phone interview, was an experience of depression. A therapist had directed him to narrative psychotherapy as a way to reframe and cope with past trauma, yet he found language to be an inadequate medium of communication. There were "not enough words, not the right words" with which to create a narrative for himself. It was then that he discovered the book *Robot-Proof* (2017) by Joseph Aoun, the president of Northeastern University, which took up the ancient Greek philosophy of *humanics* as an art of striving toward the ideal balance among spirit, mind, and body. Aoun argues that balance in the contemporary world entails data literacy, technological literacy, and human literacy (that is, the capacity for reflexive design), which encompass a "powerful tool-set for humanity" that will enable us "to collaborate with other people and machines while accentuating the strengths of both" (Aoun 2017, xix–xx).

Taking these ideas to heart, Jordan found the QS community and began to experiment with forms of self-narration that went beyond language alone, incorporating data and technological literacy.

"Data tells a story, and data doesn't lie," he told me. It "communicates what words can't." Jordan regards data as a way to speak his truth—understood not as something universal and enduring but as an index of where he is in a given moment: what he feels in relation to the world, how others are affecting him. "I didn't have the words to describe who I was until I found Quantified Self and Data for Black Lives," he told me. His position on the truth-telling potential of data is anything but naïve: he is well aware that data can be harnessed to biased algorithms and agendas such that it can distort and "lie." As he sees it, this is no reason to abandon data altogether as a tool for understanding and narrating the dynamics of self and society, and all the more reason to become data literate.

Instead of a turn inward, Jordan turns outward to the streaming data of a device: an extraction of information, a quantification, a visualization. As noted above, many critics regard the extractive, exteriorizing operation of quantification as necessarily alienating. "In the search for data-driven answers and directions," write Smith and Vonthethoff (2017), "embodied consciousness is temporarily transferred from the interiorities and sensations of the body to instead focus on their exteriorized representation as mediated visualizations." Certainly, self-quantification is an extension of "dreams of a universe graphical method for translating the vital capacity of the body into a fluid and self-evidently 'objective' representational system" (O'Neill 2017, 1628). And yet, as we have seen, it is precisely this element of self-objectification and the elimination of subjectivity that trackers find so valuable. "The reason it works is that it gets you away from yourself; it objectifies you—it's a projection or objectification of your habits," one self-tracker told me of her calorie and nutrition data. "You're the reference point, and *it puts you in this other format*." The very process of objectification—the conversion of qualitative into quantitative—is what allows a new vantage on the self and its possibilities.[5]

Jordan, too, rejected the idea that self-quantification was necessarily alienating or disempowering. "There are many positives that

come with reducing yourself to a number," he commented, echoing Joshua's observation in Amsterdam that the conversion of experience into disaggregated, quantitative bits could lead one out of impasses. Recalling the group's discussion around the "new degrees of freedom" that quantification and time-series data could afford, Jordan emphasized that data tracking liberates him from narrative emplotments that are negatively charged and entrapping—as in situations of microaggression or cultural misunderstanding—and enabled the creation of more open-ended, multi-perspectival, empathic stories. "You can tell a complex story using only numbers and signals," he said. "I call my self-tracking data my *empowerment metrics*."

CONCLUSION

At the close of the 2015 Quantified Self summit, held in San Francisco's Presidio, longtime QS organizer Steven Jonas gave a short tribute to the community's "practice of self-examination." He began with a quote from Sarah Bakewell's book on the sixteenth-century French philosopher Montaigne, whose work Bakewell characterized as "capturing that distinctive modern sense of being unsure where you belong, who you are, and what you are expected to do" (2011). What distinguished Montaigne's sometimes "meandering and digressive" essays, Jonas went on, was their probing honesty and self-reflection. "Montaigne's philosophical inquiries were not expansive and universal; they were small." Their resonance for the reader derived from their limited scope and personal experience. Likewise, QS show-and-tell talks are "small, honest, and vulnerable." They are presented by individuals who are "trying to figure out who they are and what they should be doing." In them, "we can see ourselves and figure out how to navigate our own place in a huge, immensely interesting but very confounding world."

"What we see with the new techniques and technologies of quantification is that these are not mere tools that can be picked up and put down as desired or needed. They … have 'affordances' … that have a structuring effect both on the activities to which they are ap-

plied and on us," write Davis and Scherz in the introduction to this special issue (5–6), noting the danger that we will yield responsibility more readily and adopt the diminishment and predictability the tools tacitly convey. Alongside that danger, we have seen here, are other possibilities. As media scholar Mark Hansen suggests, "The specific affordances of technical data gathering and analysis … [can be used] not solely to anticipate our tendencies and susceptibilities for purposes of manipulation and exploitation, but also to inform us about these tendencies and susceptibilities and let us act on and in virtue of them" (2015, 196). Personal data can be "gateways to *new degrees of freedom* in how to act," as Robin, the self-tracker at the 2013 QS conference, suggested.

Critics might hear in this utterance an echo of the individualizing, neoliberal mandate for an endlessly self-optimizing, "freely choosing" subject. "They're not wrong," says Jordan when I ask him how he would respond to such a charge. "The vibe is definitely there—but the *actions* of the people, if you look at what they're actually *doing* and how they relate to themselves, are the opposite: they are open to change, not fixed in their ways." Nafus and Sherman write of self-tracking as a form of "soft resistance"—that is, "always necessarily partial, firmly rooted in many of the same logics that shape the categories they seek to escape" (2014, 1785). In this sense, the kind of freedom QSers invoke is not simply the freedom of autonomy or self-mastery but also, as Colin Koopman has characterized the philosophy and life of William James, "freedom amid uncertainty as the work of self-transformation." James's ethics of self-transformation was "not only a means for adjusting to modern chance," notes Koopman, "but also an energy for resisting its normalization." It involved "instigating alternatives, provoking differentia, becoming undisciplined and even undisciplinable" (Koopman 2016, 43). Likewise, for self-trackers metrics can serve for "detouring from prescribed courses, exploring limits, and defying rules" (Sanders 2017, 21). Self-quantifiers, in this sense, are less like the depoliticized automata that Morozov (2014) describes in his chapters on the movement and more like the radical

self-doubters he hails in the final paragraph of his book, constantly asking questions, "auditing" their own algorithms, and attempting to transform themselves.

Rather than dismiss self-quantifiers—as life-avoiding and robotically inclined, as victims of data capitalism and its surveillance apparatus, or as symptomatic figures of neoliberal subjectivity and its self-mastering, entrepreneurial ethos—we might regard them as pioneers in the art of living with and through data. Inviting digital tools and epistemologies to partake in their self-transformational ethics, they gain new methods for apprehending, knowing, and inhabiting their lives—and, potentially, for resisting, repurposing, and rendering uncertain the normative proxies, behavioral categories, and governing logics that would seek to drive their conduct down certain pathways.

ACKNOWLEDGEMENTS

NOTES

1. This essay follows the growing convention of treating "data" as a collective singular noun.
2. Interview with the author, July 2013, Toronto. All subsequent quotes by self-trackers are drawn from ethnographic interviews and fieldwork conducted at QS conferences. Where recordings are available (my own or online) I quote participants directly; in other cases, I draw from my notes.
3. For instance, it might be easier to cope with a bladder problem when it is objectified in the form of a spreadsheet tallying bathroom visits, or a bipolar disorder when it is measured with scales, charts, and numbers (Martin 2007). Data renders aspects of a "somewhat inaccessible world of feelings and problems more tangible and comparable" (Sharon and Zandbergen 2016, 11).

4. Quattrone (2004, 657) describes Jesuits' graphical accounts of their daily sins: "For each sin committed from the moment of rising until the first examination, the exercitant was required to enter a dot on the upper line of the first [day]. This step was followed by 'one's resolution to do better during the time until the second examination,' which was made that night after supper. At that time other dots were placed on the lower line of the [day] and the figure examined to see if the situation had improved or worsened over the course of the day. This examination was to be repeated each day of the week." The point was to subject oneself to a methodical regimen of self-accounting so as to objectively identify and weed out passion, desire, and attachment, facilitating equipoise and rational conduct.

5. Speaking to a darker side of this objectification effect, Chris Dancy, who spent years collecting metrics on his pulse, mood, sleep, temperature, and more, admitted that he found it disconcerting to look upon his digitally formatted self: "I could see too much.… I was coming slightly unhinged with the amount of information I had about myself. It started to make me feel slightly detached from reality" (Lemov 2016, 248).

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