The Unquantified Life Is Not Worth Living

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These days, when my spouse asks me in the morning, "How did you sleep?" I often reply, "I don't know. I haven't looked at the data yet." This is because I wear a bracelet which tracks and analyzes my sleep patterns, in addition to tracking my movement during waking hours. The data I get with the device tells me how much of my sleep was deep (the more, the better) and how much overall sleep I got. It relates to my own sleep goals and also compares it to public health recommendations as well as to other people's results.

Now why should I trust the device, instead of my own sense of how I slept? Or at least triangulate between the two? Of course I do both. But the availability of this data raises interesting broader questions about the nature of self-knowledge, as I will suggest today.

My device is an example of a "wearable technology," and my by experimenting with it I join a popular culture phenomenon called the "quantified self" movement. It emerged after a 2009 *Wired* magazine cover story of wearable technologies. The popular rhetoric around this movement explicitly invokes classical conceptions of the reflective life. For example, the original *Wired* story is titled "Know Thyself." The quantified self movement celebrates the development of better technologies — such as

¹See http://quantifiedself.com/

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my bracelet to monitor movement and sleep, for example, or nutrition logging tools—as well as sharing and analyzing them in the cloud, publicly. Some enthusiastic readers of Haraway's "Cyborg Manifesto" see these developments as theory in practice. For non-enthusiasts, these reflect just the latest troubling development in the ability of the state and the market to monitor individual behaviors. Theoretically sophisticated non-enthusiasts frequently frame these worries in Foucauldian terms, as the place where "technologies of the self" meet "governmentality." In other words, it isn't just about monitoring behaviors, but enlisting individuals themselves in controlling them. For all critics, these are reflections of the hyper-individualized, narcissistic trend of superficial self-"perfection" masquerading as self-knowledge.

In this paper, partly not to lose a significant part of my professional friendship network, I approach the phenomenon from a different perspective and argue, neither against nor with the critics, that the possibility of the digitization of the self allows us to ask new kinds of questions about self-knowledge: Where does *self*-knowledge come from? Whence its authority? What modes of representationality does it permit? These connect to questions about what it means to have distributed agency between a putative "self," on the one hand, and putatively self-controlled objects and technologies, on the other. Actually, at the moment, this paper does hardly more than ask those questions. But, I will suggest, asking them points to interesting broader issues about agency — maybe even to politics. Eventually (though not today)drawing from the psychological literature on reflective practice, I want to suggest that studying this particular interface of technology and autonomy may be a way of understanding the tensions between Kantian and the so-called post-humanist conceptions of agency.

To pile on the interesting questions without answers, let me note that there are two related issues. One is the nature of technologies and what they can and cannot do. The other is a more abstract epistemic question of information: what *kind of* knowledge self-knowledge is, or should be.

Consider the times someone has told you "I'm the kind of person who...," and you will realize how often theory precedes data when it comes to self-knowledge

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² Donna J. Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1990), 149–81.

claims. We tend to theorize ourselves, that is, make claims about the kinds of people we are and how we are likely to act. And often, unlike scholars, we seem relatively unwilling to test the empirical implications of those theories — in fact, many of us frequently resist data that challenges our theories about ourselves, even when the data arrives unbidden. Just think of how good at you are rejecting the evidence given by all your failed diets, exercise plans, new year's resolutions and instances of procrastination to hold onto your happy sense of yourself as a decisive, hardworking, consistent, strong-willed individual.

So when we look at the recurrence of exhortations in (at least) the Western ethical canon to "know thyself," we are dealing with a tall order, not a statement of an easy achievement. When Socrates says that, for him, the unexamined life is not worth living, he is setting himself as an exemplar to others. And when John Stuart Mill proposes the social epistemology he calls experiments in living, he is not merely licensing what people already do, but urging them to start something a bit more challenging than going on about their lives as before.

The on-the-ground weakness of self-knowledge doesn't, of course, mean that there aren't any success stories in the "know thyself" department. Theorizing about oneself doesn't have to be, as snarky empiricists put it, data-free speculation. Nor does the "data" have to be quantitative. The last century or so of clinical talk therapy practices in all its variety is just the most recent iteration of reflective attempts at self-knowledge. There is no obvious epistemic perch from which to claim such attempts have been worthless, whatever your opinions of psychoanalysis in its variants, cognitive behavior therapy, or anything in between.

But it is interesting to ask how changing the epistemic modality might change our reflective practices. What does it mean to see the self as data to be analyzed, in contrast to seeing the self as something to be interpreted? What does it mean to change the means with which we do it, from dialogic and conceptual hermeneutics to quantification assisted by technological tools?

This, then, is the context in which quantifying or "datafying" ourselves might seem something genuinely new. It has, of course, been possible to quantify one's life in multiple ways for a long time. One might, in fact, argue that "life logging" is just

another name for keeping a diary. Travelogues, diaries that document quantifiable details such as weather or hours slept, training logs by professional and recreational athletes, and Weight Watchers food diaries are all examples of this.

But there are important differences. In general, when thinking about new technologies of any kind, it is worth asking two related but different questions. The first: does this technology allow us to do something we are already doing better? Consider, for example, almost all instructors' least favorite activity: grading. Convenient document-annotation tools and easy file sharing make digital grading of student work, especially written work, very easy. There are many benefits, from ecological ones (less paper) to other efficiencies, such as archiving work, preventing plagiarism, running corpus linguistics analytics on student writing, and the like. Technology, in other words, allow us to do something we have always done, grading, better than before. Of course, not all instructors find digital grading an improvement, which also reminds us to keep in mind the question of what counts as "better than before." So consider another example: in sports that involve significant cardiovascular effort, knowing your heart rate can be an important training diagnostic. It has always been possible to track one's heart rate, as long as one has a watch that counts seconds. But the development of affordable wireless heart rate monitors in the 1990s made such tracking fundamentally more efficient. A heart rate monitor that reports your heart rate in real time and consistently throughout your exercise, easily readable on your watch obviates the need to stop, hold your fingers on your carotid artery, and count.

This points to the second question we should ask about new technologies: does a technology allow us to do something *new*, something we could not do before? Affordable wireless heart rate monitors are arguably an example of this. They allow you to do something that was in principle doable but practically not. To use the language of big data analytics, such technologies allow users to "instrument" previously "uninstrumented sites." The quantitatively minded twentieth— or even nineteenth— century diarist might have been able to record the daily weather data, the number of people she talked to, or perhaps the time she spent writing, but the twenty-first-century life logger can record the number of steps she took, the heart rate variation of her

exercise, the calories in the foods she ate or the ratio of deep to light sleep during her night with no more than a push of a button — or less.

One of the most important affordances of digital information is that it is easily retrievable. For ordinary users of information, this means that it is much easier to find things we are looking for. If all the articles you read are in digital format accessible from your computer, you don't need to remember which filing cabinet or folder you might have filed the photocopy in. But a far more important component is that the digital format makes powerful analytics possible. If you write by hand but are interested in how many words you produce, how do you keep track? By counting by hand, and counting again. If, instead, you write on a computer, this information is usually available simply by glancing somewhere on your screen.

What is interesting about the commercial self-quantification tools is that most of the analytics are still done for you. As a longterm exercise quantifier, I might be grateful for my running site's immediate details about my average mileage, pace, and heart rate data, and the helpful visualizations provided. But as an aspiring data scientist, I might also be interested in further analyses on, say, average paces for a given pair of shoes, time of day, or weather, all of which are variables tracked, but not analyzed. It is so far not a coincidence that the data collected is proprietary: the raw data is not shared with users. Think of this as the equivalent of the expert knowledge of the conventional therapist or doctor, who was unlikely to share particularly deep explanations behind his advice or recommendations, if any. In other words, by black-boxing their raw data and algorithms, many of the current tools are asking you to take their word for it, both in terms of the reliability of the information collected and, in their feedback, what matters.

It doesn't have to be like this, and there are signs that some of the black boxes are being opened, at least a bit. In fact, things are somewhat better on what we might call the interoperability front. Most likely driven by commercial interests, self-digitization offers multiple ways of merging data from one application to another: your Fitbit app can pull data from your MyFitnessPal and vice versa; Tic Trac³ even lets you connect multiple sources of self-quantified information for relatively rich "cross-

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³ See https://tictrac.com/.

domain" analytics: you could, for example, cross-tabulate your exercise and email use if you wanted.

Still, in terms of giving the end user the agency for her own analytics is the biggest reason a really meaningful self-datafication still in its infancy.⁴ Reasonable userfacing analytics are clearly not the priority of product developers, which suggests they are not a priority among the mass users of self-quantification data. This is not surprising, perhaps, but it does raise the very interesting question of what kinds of analytic skills and data numeracy is it reasonable to expect in the general population.

One provisional conclusion, then, is that even if one viewed the overall development of self-quantification as positive or at least benign, it remains epistemically not as novel as one might hope: individuals still have to rely on someone else's epistemic authority. *Collaborative* epistemic authority is probably what we should hope for anyway, but as long as individuals give up the stewardship of their self-quantified data and are ignorant of the algorithms that produce the guidance they might rely on, they effectively farm out the creation of what they might now consider self-knowledge. This doesn't have to be a bad thing. There are many good reasons to think that the twenty-first-century version of the aspiration for Protestant theology — "priesthood of all believers" — might not be such a good idea. Dr. Google may have produced more hypochondriacs who tax health-care resources than people whose clever use of easily accessible information serves as a crowd-sourced triage, and analogous things may be happening in the domain of self-quantification.

I conclude with a couple of other observations and questions.

Isn't this just governmentality on steroids. It's reasonable to say that self-quantitification evokes a semi-Foucauldian worry: the idea that these tools enlist individuals themselves in a surveillance by others — whether corporations, potentially the government, individuals' social networks — and smart "actants," and thereby also enlist the individuals in controlling their behaviors. The degree to which the tools

⁴Eric A. Taub, "Wrangling Data From a Huge Variety of Fitness Gadgets," *The New York Times*, October 30, 2013, sec. Technology / Personal Tech,

http://www.nytimes.com/2013/10/31/technology/personaltech/wrangling-data-from-a-huge-variety-of-fitness-apps-and-devices.html.

⁵ Bruno. Latour, *Pandora's Hope: Essays on the Reality of Science Studies*, x, 324 p. (Cambridge, Mass.: Harvard University Press, 1999).

developed are commercial and their users lifestyle-obsessed exercise addicts, dieters, and other twenty-first-century narcissists (I do include myself at least in some of these groups, so this is not exactly a criticism), the concerns are reasonable. But given the actual infrastructure of mobile app development these days, hacker libertarianism, and the way in which these tools can creatively be used for other purposes, self-quantification doesn't have to give up its data, remain blind to the logic behind the advice, or be obsessed about the self. So I want to resist the glib dismissals of the potential.

So a different sort of observation.

What does it mean to be a self-reflective agent? Put aside the concerns about how much this modality of self-observation improves on previous ones and simply note that the activity of logging, like diary writing for centuries previously, is perforce a mode of reflection. Here is a piece of anecdata: For the last month or so, I have been using Victor Strecher's "On Purpose" app daily to keep track of how much my daily activity is consistent with what I claimed, in setting the thing up, with what I want my life to be⁶. So far, the analytics offered by the app are minimal, but thinking daily about how "present" I was that day has gotten me reflecting on my daily habits and activities. And often doing something about them as a result.

It's true that the B- critique of Kantian accounts of agency is that, "Hell no, you can't constantly deliberate about your maxims," but what we might call the priming effect — or maybe simply reminders — from these life-logging activities are an interesting example where the agency of objects — and apps — is actually consistent with and fosters the kind of reflection some Kantians among ourselves might endorse.

But what happened to quantification? None of this really presupposes self-quantification, though. So it's reasonable to ask what the benefits, if any, of turning one's life into quantitative data points are. The crucial way in which the quantified self differs from its relative contemporary trend, Big Data, is that it is, mainly *small* data. One doesn't have to be a statistician to realize the inferences to be drawn tend to be pretty minimal, for quite a long time, at least. When my coffee tracking app (yes, I have one) tells me I sleep seven hours and forty-one minutes a night when I have more than

⁶ See http://www.dungbeetle.org/about-the-app/.

450 mg of caffeine per day, as opposed to the seven hours and fifty-four minutes when I have less than 300 mg, the inferential value is zero, at least until there are more than two days during which I had more than 450 mg. In other words, because each of us is "an experiment of one," as the 1970s running guru George Sheehan claimed, there are far too many variables and therefore far too few degrees of freedom for the self-quantification to offer anything epistemically interesting.

Well, it isn't quite that bad, and one very interesting feature about the way self-quantification is the way in which we actually *aren't* experiments of one. Many of the tools do in fact turn your small data into big by collecting all users' data and doing powerful analytics on it. At first, it usually just means that the end users can begin comparing themselves to others, sometimes to our delight — it's satisfying to know that I take more than 100% more steps per day than other men my age — and interesting to know I consume an average amount of coffee. There is *potential* of analytics such as these becoming meaningful sources of knowledge about ourselves. In particular — and here I speculate — quantified information like this can temper our excessive sense of our uniqueness.

And, now, my final observation.

How do we see ourselves? The tools that help you quantify yourself almost invariably provide visuals. Data visualization, along with general data science, is one of the gold rushes of the moment: everyone wants to get there. Political theorists, except for a small number of folks, a significant percentage of which is in this room, have not much cared about visuals. That, to me, is both weird and unfortunate. But maybe that is why because my version of science envy is the drooling I do over cool charts and other visuals, so closing with these observations may be idiosyncratic. But it has always struck me as odd that we theorists don't think a concept map might be a reasonable thing to produce in *Political Theory*, for example. I'd be a bit less puzzled if something like a verbal *narrative* were the key tool of our trade, but that's not the case, and comic books — I mean, graphic novels — put a lie to the impossibility of a visual narrative, anyway. Our textiness, in other words, puzzles me⁷. This is by way of asking why it

⁷ Especially if more of the other texty fields, such as the study of literature, follow Franco Moretti's radical ideas about data and visualization. See Franco Moretti, *Graphs, Maps, Trees: Abstract Models for a Literary History*, 119 p. (London; New York: Verso, 2005).

might be interesting to think of self-knowledge in visual terms. The humanist-antipositivist critique of modern social science has convinced many of us that seeing ourselves as data points on a chart is a bad thing. Is it?