Building a Qualified Self around Lifecycles of Experience and Thinking

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Abstract
This paper shares some questions and preliminary findings emerging from a work-in-progress exploring methods to obtain qualitative data to contextualize self-tracked data. With the emergence of more sophisticated body sensors we may be able to automatically record our data but that will not necessary mean that data will be more accurate. Auto-generated data is easier to collect but we are learning how quantified self is not telling the full story. The goal of this paper is to trigger conversation about the need to explore methods to obtain qualitative data from quantitative self-tracked data and about the capacity of the digital traces of our human existence to account for our thoughts and our feelings.

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Introduction
Self-tracking is a growing phenomenon as the increased ubiquity of activity trackers and smart

devices with in-built sensors makes it easier to continuously and automatically collect data about our movements, moods and fitness [4]. Enthusiasts report that the increased mindfulness about their activity is a powerful motivator and critical 'first step' to better fitness [7]. It has also contributed to the rise of a global community of self-trackers, such as the Quantified Self communities where members share their self-tracking experiences and explorations with data tools and hacks [3].

A less explored area has been to link the quantitative measures of the individual with higher level qualitative phenomena such as experience, thought, or mood. This has been identified as a transition where the quantified self provides individuals with means for qualifying themselves [7]. As Boam & Webb [2] observe:

"With richer context, we can better understand the quality of these *quantities, and thereby better understand our being. As this capacity advances, the emphasis shifts to more metaphysical ways of describing ourselves."*

The goal of this paper is to trigger conversation about the need to explore methods to obtain qualitative data from quantitative self-tracked data and about the capacity of the digital traces of our human existence to account for our thoughts and our feelings. What is the effect of recording the affect of our human experiences?

Case Study 1: Qualified Self Building and Exploration

During their studies in the Master of Data Science and Innovation (MDSI) program[1] at the University of Technology Sydney (UTS), our students explore this self-tracking phenomenon as part of a core subject in which they are asked to track their activity over an extended period. Students explore and analyze their own data, and with randomized data from others, in a small group of 10 and at a class/community level. The Assignment is intended to humanize the exploration of big data by providing a real-life case for exploring relationships in data, policy debates about data privacy and insight into one's own life.

The default tools often used for self-tracking are those that measure steps, heart-rate, calories and other quantifiable measures of activity – rather unsurprising given that the term 'Quantified Self' is used to shorthand this practice [6]. For many students, these numbers become confronting – reminders about what they are eating (and how much), how much (or how little) sleep they are getting and the number of steps they are taking each day (or lack thereof) and so on. When introducing the assignment we emphasize students can gather data about anything and need not limit themselves to data measureable by an activity tracker. Nonetheless, our experience has shown students do generally stick with these measures because the sensors and tools available make it so easy for them to do so in automated fashion.

[1] http://utscic.edu.au/learn/mdsi/

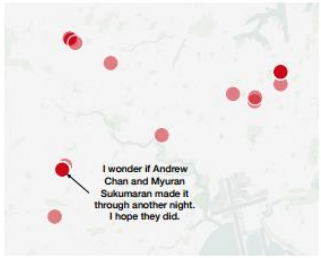

Figure 2: Geo-localized visualization of the self-reported thoughts of one participant at six intervals every day during a week.

Figure 3: A second person tracking her thoughts. The visualization showed to the participant how some of her 'best' ideas occur on the sea, during her daily ferry commuting trips.

Apart from concerns about the confrontational experience, some students have reported in their write-up of their experience, we also wanted to encourage them to be more imaginative about the data they collect in this exercise and widen their gaze about the possibilities of such data practices. Members of the MDSI teaching team therefore experimented with an alternative to the more common forms of activity tracking (steps, calories, heart rate, sleep) that flips the idea of measuring human activity at regular intervals in that the data we attempted to measure at six pre-determined intervals each day were our thoughts.

Case Study 2: "Thought Experiment"

Our presentation to the Workshop will share the self-tracking, collaborative thought experiment carried out by four members of the MDSI team. It was both an exercise related to our teaching and part of an ongoing creative work exploring idea incubation, using a collaborative self-tracking practice developed as part of Anderson's[1] ongoing research and creative practice exploring idea incubation and the enablers of creativity and innovation. The impetus for this thought experiment was the following statement from John Howkins when writing about creative ecologies:

"*The main question of our age is how we live our lives. As we struggle with this, we face other questions. How do we handle ideas and knowledge, both our own and other people's? What relationship to ideas do we want? Where do we want to think?*" [5]

To consider ways we might use the data collected to form a response to these provocative questions, each participating member of the MDSI team recorded what we were thinking at six intervals each day for a week,

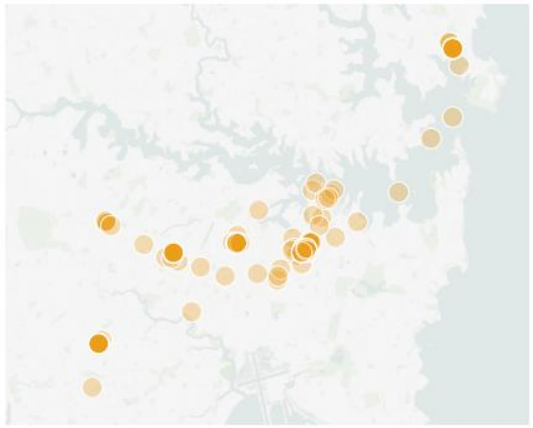

Figure 1: Combined data points of recordings of what four participants were thinking at six intervals each day for a week.

using a journaling app that embedded location and weather information in each entry we could export and share at the end of our data collection phase. So that each participant could keep the practice sustainable over time, the team limited each of their posts to a few sentences: essentially creating 6 thought bubbles a day for each participant. The resulting data allowed us to create word clouds of these thought bubbles and to map the team's movements across time and space.

Figure 1 illustrates the combined data points that allows to quantify different aspects of the thought process such as identifying hot spots and localization of people during the day. However, a deeper analysis is required to understand the qualities of such data. For example, Figures 2 and 3 represent the geo-localized visualization of thought of two different participants. Providing the user with a set of quantitative information about their thoughts, may help them understand higher level qualitative phenomena. For example, the

participant with the thought map shown in Figure 3 reflected about the importance of her daily ferry trips by realizing that some of her most insightful ideas happen on the water. Our presentation in the workshop will share some of the visualizations resulting from our analysis. With words and images we will also share the individual and collective insights we gleaned from this process.

Discussion

As a consequence of that first thought experiment, our team has begun to speculate about our next thought experiment in response to the series of questions introduced in the opening section of this paper.

As we continue to track and store the digital traces of our experience, what is necessary to help us preserve and nurture the 'story' of those lived experiences? Telling stories is one of our most enduring forms of human communication. It is a practice embedded in all cultures and communities but one which is also so delightfully human that it can transcend cultural and community boundaries. It is how we make meaning of our world. The digital and data tools that help us to track and manage our digital traces can also enable richer multimodal forms of storytelling augmenting human capacity and imagination. As these tools become more readily available and ubiquitous, they become part of the 'everyday life' of communities who can now not only produce these rich stories but share them with audiences on a global scale. Combining the seemingly innate capacity that humans have to tell and share stories with the power of digital and data tools to augment human practices affords these become ever more valued for understanding complexity. But where is the agency in this comingling of flesh and digital memory?

Human memory is radically different from that of the machines that partner us on these self-tracking journeys. What will be the impact on the narrative over time? What happens to the therapeutic value of memory given that when we outsource to a digital device, for instance, it is likely that the computer will not 'forget' in the same way that human memory reshapes and forgets experiences over time. The flesh world forgets (e.g.: dementia and normal aging causes our flesh world recollections to be reshaped and refashioned). When should the digital self forget (e.g.: organizational forgetting)?

Speculating about our next steps

Our work in progress has raised more questions than answers. Our next steps will be focused on validating whether we have captured a 'day in the life' of our participants' thinking. With the emergence of more sophisticated body sensors we may be able to automatically record our data but that will not necessary mean that data will be more accurate. Auto-generated data is easier to collect but we are learning how quantified self is not telling the full story. We echo the concerns raised by Boam and Webb [2], who wrote "*Without context, sensing data tells an incomplete story*."

Making time to think offers an opportunity to tap into the qualified self -- which was the motivator for the experiment in the first place – and capture some of the story context that can enrich the sense we make of sensing data.

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