Rethinking Human Body between Lay and Expert Knowledge Suggested by Self-tracking Technologies

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Introduction

The use of digital technologies for monitoring movements, posting messages or following friends on social networks, rating restaurants, or an hotel, a film or a series, generates data tracks that offer new possibilities of visualizing and knowing behavioural characteristics. Particularly, digital technologies are even more used in order to self-track everyday practices and biometrics information, such as weight, calories intake, mood, body temperature, heart rate, blood glucose, etc. (Lupton, 2013; 2016; Bianchieri et al., in Corbasiero, Ruspini, 2016; Maturo, Setiffi, 2016; Pantzar, Ruckenstein, 2015).

These technologies rise several questions. If, from one hand, they can contribute at the constitution of democratic spaces of non-formal learning (Benson,Harkavy, 2002; Starke-Meyerring, Wilson, 2008); from the other hand, they can be understood as neoliberal devices that shape 'ideal citizens' responsible of their own wellbeing aimed at constant self-improvement (Apple et al., 2012; Lupton, 2016; Selwyn, 2013).

This paper draws on literature from self-tracking practices (Lupton, 2018), the field of Science and Technologies Studies (STS) (Latour, 2005; Law, 1994), and the principle of symmetry between social and material – sociomaterial (Landri, Viteritti, 2016; Sørensen, 2009) – in the reconfiguration of agency as a relational capacity realized through the intra-actions between human and non-human actors (Barad 2003-2007). The aim is to question the learning processes embedded in self-tracking practices contributing to the discussion on the turn to practice and embodied knowledge (Gherardi, 2017) that is back through the materiality of digital technologies used in everyday life.

1. Bodies and data in the everyday life

Self-tracking practices are reconfiguring our experience of embodiment, our relationships and our meanings of body through the quantification of the self. Self-trackers experiment on their bodies through the emergence of 'personal analytics' practices that typically aim for self-knowledge.

In this perspective, the body becomes an assemblage that can be scrutinized and separated into a series of virtual flows. The result is that flows exist into assemblages of heterogeneous elements. The elements that compose assemblages are multiple, comprised of social and material parts and processes. Self-tracking technologies standardizes these flows that can be surveilled and controlled by subjects, transforming the body into digital information, that are mobile and comparable. The body is broken down in different settings through a series of 'data doubles', that circulate in «surveillant assemblages» (Haggerty, Ericson 2000). Surveillance has become a salient topic in the analysis of how self-

tracking practices emerge as part of an ongoing process in which body is abstracted by subjects and controlled at the same time by governments and markets.

Here, the body, translated as information through these technologies, becomes a heterogeneous assemblage. As Latour (2004, 205) underlines, «to have a body is to learn to be affected, meaning 'effectuated', moved, put into motion by other entities, human or nonhuman». The materiality is able to render the body sensitive to the differences of the world. It is that the body learns into dynamic trajectories (Viteritti, 2012) and comes to matter in the intra-action between the sociality and materiality of the world (Barad, 2007). The result is that materiality is back through, in our case, self-tracking practices.

Agency is relational and distributed through entanglements of people with technologies. Particularly, humans and apps work together in generating human-app assemblages (Lupton, 2018), in which emerge knowledge as a doing, not only a mental activity, situated and enacted within and across humans and nonhumans. Apps, directed at monitoring body, inscribe knowledge that can be reconfigured through the daily-human-use of the app. The process of reconfiguration draws attention to how *inscribed* knowledge can *suggest* different ways to think about body. People who do not meet the inscription associated with the imagined uses can active different ways in performances of embodiment and selfhood.

2. Knowledge(s) enacted by self-tracking practices

Self-tracking apps are designed to take trace of practices. They are mediators, from one hand, of expert knowledge embedded in the script of the materiality, and, from the other, of bodily knowledge: «in the twofold sense that the body is a source of aesthetic knowledge, and that knowing how to know through the body» (Gherardi, 2006: 228). Following the literature of the turn to affect and the turn to practice, the attention is on body, embodied knowing and sociomateriality. The concept of sociomaterial practices implies that social and material are entangled, and knowledge emerges from the interconnections with material arrangements (Gherardi, 2017).

Particularly, adopting a sociomaterial perspective allows to indagate in a symmetric way the ways in which social and material, human and non-human actors, act across processes of mediation, negotiation and translation (Latour, 2005). Social becomes visible through the assemblage of heterogeneous entities which emerge though their intra-actions (Barad, 2007). The term of intra-action recognizes that bodies and objects are not distinct entities but come to matter in their interactions.

This argument enables to focus on how the smartphone can become a node in heterogeneous networks by which self-tracking apps can suggest lay and expert knowledge(s), enacted by sociomaterial practices.

3. Methodology

The research discussed here is ongoing. For this reason, we present the user's experience of Elena (invented name) as a privileged witness in order to investigate how her Smartphone becomes a digital space by which body comes to matter.

The semistructured interview, lasted one hour, was been conducted to reconstruct the role of the materiality in order to understand the subjectivity of the

user's experience. The episode-interview was used to try investigating everyday life and practices. This technique has the aim to ask the interviewee questions that lead them to tell concrete episodes and situations (Flick, 2000).

Even if she uses several apps with the scope to self-track her physical activity and calories burned, here, for the economy of the contribution, we put attention on the use of only one app: Yazio. The interview has been analyzed to investigate the turning in practice (Gherardi, 2017) of the knowledge inscribed in the script of the app. At the same time, the app has been analyzed with digital technique (Maturo, Setiffi, 2016; Lupton and Jutel, 2015) in order to describe the graphical characteristics, then the predetermination of the situation that users need to imagine, starting with the technical device and the pre-iscription (notices, contracts, advice, instructions etc.) itself (Akrick in Mattozzi, 2006).

4. Embodied knowing and smartphone

In this session, we illustrate how the smartphone carries the body into data flows that are reconfigured by embodied knowing.

Elena is mother of two children. She went to the gym before having children. Now, she has not time, so she uses the smartphone to do work-out at home and try to follow a healthy diet. She discovers the app Yazio through Facebook. Yazio is an app that provides a guide for the daily diet. Yazio tracks calories, carbohydrates, protein and fat. Each food is divided according to the caloric intake, that is evaluated regarding the user's personal goals (strengthening the muscles, losing weight, etc.). This app tracks also physical activity in order to estimate the calories burned.

Despite the different and plural potential uses, Elena uses the app with the scope of tracking her daily diet, and during the use she understands and learns how the world of diet works since her body. She says:

> … I set a series of parameters. So, my goal is to lose weight. I would like to lose 500 grams in a week. So, every day I have this tot available of calories which they must be further distributed as follows… this is my typical day, I have 1469 calories available of which 161 gr of carbohydrates, 90 gr of proteins and 47 of fats. Then, I add what I eat in the app, which become a database of my diet. For example, this morning I have eaten 3 'gocciole'. That calorie bombe! I add on, and he say you how many of these calories are carbohydrates, proteins and fats. Because the objective is clearly not only caloric but is also maintaining the proportion between the three main macronutrients in a certain way. This is the evolution of the diets today. You can't eat 1500 calories of only carbohydrates because you don't lose weight.

The app suggests some knowledge that are reconfigured and embedded in the everyday practices. The knowledge inscribed in the app contribute to active a process of reflection. Elena says that she enhances some aspects of her body and her habits understanding the importance of a healthy lifestyle without limitations:

> […] an important thing that I understood […] Yazio taught me to reflect about issues of sustainability. What it wins in the long time is a lifestyle that is pleasant for you […] There is not one diet. There should be a healthy lifestyle with exceptions. There is the day when you would like to eat everything, and it's ok […]

Elena are producing a chronology of her diet transforming her lifestyle into data. The food is a parameter of wellness. The app contributes to quantify the wellness transforming into data the calories intake. In this sense, Elena learns

to read the food regarding the macronutrients that she needs based on her physical activity and her goals. She tinkers with the app and use it as an indicator in order to increase her knowledge through research on Internet or reading thematic books.

Conclusions

Analyzing the material world as a result, albeit provisional, of intra-actions between heterogeneous actors – humans and nonhumans – allows us to pay attention to the ways in which bodies are inscribed and transformed into data flows, generating sociomaterial practices of self-management and self-promotion.

Elena tracks her daily diet enhancing self-tracking practices that emerge from the entanglements of the social and the material. A central aspect is that the knowledge emerges as a doing situated in trajectories of practices which are the result of the intra-actions by which bodies encounter other bodies, other material, discursive and communicational elements in technologically mediated worlds.

Thus, we propose to look the process of embodiment, since the 'body' and the 'mind' are not dichotomized but entwined and situated in sociomaterial practices in which agency is relational and distributed among material and social entities. Particularly, self-tracking practices enact an embodied [LZ1]knowing, that is the effect of intra-actions between lay and expert knowledge. Humans and apps work together achieving agency in human-apps assemblages, where bodies learn to be affected across the materiality of the worlds.

Moreover, the body acting in a more-than human world can be surveilled and controlled by governments. In this sense, analyses on the emergence of new ways of biosociality and biocitizenship become even more important. For these reasons, this contribution tried to begin a discussion on how self-tracking practices can be read as sociomaterial practice of embodied knowledge in order to underline the importance to re-think the forms of democracy in a context in which the 'bio' become a central topic in the ways of doing citizenship.

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