TRACK 24
Social learning and technoscience from below: uses of digital devices and knowledge construction

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Interpreting personal data and creating knowledge in sports. A coaches' perspective
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Wearable technologies can support the individual self-monitoring in different domains. They produce detailed biometric data that may be collected by the individual and then shared with others (Lupton, 2013). In the sports domain, self-monitoring is a means to improve athletes'
performances (Kirschenbaum et al, 1982), and more in general to guide training and stimulate self-awareness and self-knowledge as well. Thus, wearable technologies may offer athletes and coaches opportunities to achieve a deeper knowledge of the athlete's body through the collection of a variety of data.
The use of wearable devices and related collected data has been mainly investigated from the athlete's point of view, while the coach's perspective has been received almost no attention. In particular, we do not know how coaches interact with data to support elite athletes in increasing the knowledge about their body and performance. Our contribution aims to fill this research gap by answering the following question: how can wearable devices support, mediate, and integrate the knowledge of coaches concerning their athletes' work?
A qualitative methodology has been adopted: we in-depth interviewed coaches belonging to different sports disciplines comparing their perspective with that of their elite athletes. Our results support the idea that wearable technologies can provide coaches with a greater degree of certainty about athletes' performances during training and races, as well as a deeper "exact" knowledge of their physical condition, finally enabling new forms of learning with relevant implications for theory and practice.

Creating digital knowledge through numbers: notes from a field-study
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In recent years, self-generated data has proliferated into numerous spheres of individual activities, creating a new form of (lay)knowledge. Self-tracking activities can simplify information collection by giving users access to graphs, tables, and statistics about their physical and psychological conditions. Apps and wearable devices therefore facilitate self-knowledge through numerical data. Created through self-tracking, these numerical data are socially constructed elements which do not offer a neutral world view. On the contrary, they both describe our reality and influence user behavior; moreover, numerical data are not describing reality, but creating it.
Our research focused on understanding how users generate a set of personal knowledge and how the use of apps and wearable devices reinforce the mechanisms of learning– the creation of the so-called quantified self. Through 20 semi-structured interviews with members of two Quantified Self communities (Turin and Cambridge), we observed how the creation of data foments a new form of self-awareness, especially when shared with experts/other quantified-selfers. During the meeting, the quantified-selfers showed what they learned and how they learned by sharing their ideas and experiences.
Self-tracking allows the 'datification' of one's own experience and activities by effectively transforming numbers into knowledge. This study exposes both the strengths and limits of the relationship between humans and technological devices when they are inserted into daily practices.