Artificial Intelligence in healthcare: insights from IBM Watson

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Purpose – Artificial intelligence (AI) is a hot topic in newspapers, business magazines and company reports. It has progressed quite quickly to include self-driving cars, Google Deep Mind and International Business Machines (IBM) Watson. It seems to have created unprecedented opportunities for business and society due to the value of the increased connectedness and smartness (Spohrer, 2017). The main conversation on technology is on its technical feasibility and use, while there is a need to take into account the economic and societal impacts (Arthur, 2009). There is a need to study new service provisions enabled by AI and figure out how the new interactions between humans and non-humans emerge to improve value co-creation and innovation. This work investigates how the adoption of IBM Watson affects the practices of innovation

Design/Methodology/approach – This article adopts a qualitative research approach to explicate complex issues and advance extant knowledge (Dubois & Gadde, 2002; Gummesson, 2005, 2017). The research focuses on cognitive computing (i.e., Watson) developed by IBM, which is an advanced application for natural language processing, information retrieval, knowledge representation, automated reasoning and automatic learning technologies. The research process concerned the investigation of IBM Watson working through a cognitive system platform. Semi-structured interviews with the members of IBM's top-management and digital transformation specialists provided us with insights on how IBM Watson develops innovative solutions and supports organizations in innovating their strategies and redefining the boundaries of the connections between different actors.

Findings – The study examines Watson's ability to act and the actors engaging with a social structure. This research allows for detecting how actors interact, work, learn and discover new ways to do things, serve others better and co-create value through AI. A fresh approach is offered to explore the constellations that actors form in practising innovation and to understand the connections within the nexus of practices.

Originality/value – The contribution of this study shifts from the understanding of the technology to the sociomaterial practices enabled by the application of IBM Watson. We highlight a set of practices that rests on other practices performed by actors who integrate material and social resources (e.g., knowledge, tools, languages and artefacts) to improve service provision, value co-creation and innovation.

Key words – Watson technologies, practices, service innovation, value co-creation

Paper type – Research paper