Artificial Intelligence as a driver to enable Healthcare Service Ecosystem viability

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Purpose – The work aims to understand how new Artificial Intelligence (AI) solutions can stimulate new ways of interactions and resources integration between healthcare actors, to make healthcare services more timely and precise and to enhance the pursuit and maintenance of viability healthcare systems here understood as service ecosystems.
The healthcare service ecosystems operate in an increasing complexity due to different levels of government and the continuous proliferation of laws, to resources scarcity and the unpredictability of contingencies, as the Covid-19 pandemic. These conditions can lead to the ineffectiveness of healthcare services, inefficiencies in resources management and undermine, at any time, its stability and autopoietic nature.

Design/Methodology/approach – First, a literature review is carried out and then, with an inductive approach, some exemplary cases are described (Babylon Health, Cloud DX, Healthymize implementation) according to the case illustration method.

Findings – AI may allow an improvement in healthcare information management, as well as the development of forms of virtual healthcare, supporting predictive screening (Racine et al., 2019) that would also lead to a reduction in health costs and inefficiency.
AI solutions also make it possible to promote personalized medicine (Dilsizian, Siegel, 2014), which depends on patient symmetrical autonomy-based participation and contributes to his empowerment (Myskja, Steinsbekk, 2020), with positive effects on healthcare facility management (Polese, Carrubbo, 2017).
AI as an operant resource (Akaka, Vargo, 2014) and as a clinical decision support system (Shortliffe, Sepúlveda, 2018), by facilitating coordination and dialogue between actors, may foster new value co-creation practices and new institutions, and therefore may enable decision-makers to better manage complexity (Skylar et al., 2019) and to preserve service ecosystem viability.

Research limitations – The work proposes a cases illustration, not a case study, so it is not possible to apply a deductive approach to contribute to an advancement of knowledge on the subject starting from empirical evidence.

Practical implications – An effective integration of AI and human intelligence may enhance the service ecosystem management as a whole.

Originality/value – This work proposes a combined reading of service research, with a deepening on Service-Dominant Logic, and systems thinking, by using the Viable Systems Approach as the main interpretative lens. It considers the role of AI in stimulating new value co-creation practices and new institutions useful for healthcare ecosystem viability.

Key words Artificial Intelligence; Healthcare service ecosystem; Complexity management; Service-Dominant Logic; Viable Systems Approach

Paper type –Research paper