EMERGENCE OF CO-CREATION FROM SERVICE ECOSTRUCTURES

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Purpose – The purpose of this research is the derivation of principles for the design of viable service systems and predictions of their performance in value co-creation. These principles are derived from the integration of sound theoretical constructs of transformation functions, decision analysis, service ecostructure, Normalized Systems Theory (NST) and Viable Systems Approach (VSA). The research models the performance of service journeys under different service ecostructures and demonstrates the variety of outcomes that emerge as a function of ecostructure design.

Design/Methodology/approach – This research begins with a literature review to establish a model of a service journey as a sequence of contexts, each of which integrates components of a service ecosystem. The service ecostructure is defined as a precondition for the emergence of an ecosystem (Badinelli et al 2019). Features of ecostructure that engender features of normalized systems are identified. By invoking the properties of evolvability and observability of Normalized Systems Theory (De Bruyn, P., 2014; Mannaert, H. and Verelst, J., 2009) the properties of homeostasis, autopoiesis, equifinality of VSA (Golinelli, G. M., 2010) are derived for the emergent ecosystems.
The ecostructure model construct is extended by introducing nonlinearity, uncertainty and fuzziness to the actors' models of engagement decisions that determine the trajectory of the service through the service ecosystem (Badinelli et al, 2012; Badinelli, 2012, 2013). Finally, the methodology of computer simulation is applied to provide experimental results of the performance of different ecostructures and forms of indeterminacy.

Findings – The outcomes of this research include:
1. A model of service journeys as functions of service ecostructure.
2. An integration of the theoretical constructs of transformation functions, decision analysis, service ecostructure, Normalized Systems Theory and Viable Systems Approach.
3. An elucidation of emergence through the modeling of the effects of nonlinearity, randomness and fuzziness on the outcomes of a service journey.
4. Prescriptions for the design of service ecostructures for viability.

Practical implications – This research introduces prescriptions for the design of service systems and an exposition of the variety and variability of the outcomes that emerge from a service ecosystem as functions of the design of the service ecostructure.

Originality/value – The integration of ecostructure, NST with VSA is a promising research initiative.

Key words - Service ecosystem, Emergence, Viable Systems Approach, Normalized System Theory

Paper type – Research paper

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