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THE 2021 NAPLES FORUM ON SERVICE, A SERVICE LENS ON CHANGING BUSINESS AND SOCIETY

edited by

**EVERT GUMMESSON, CRISTINA MELE, FRANCESCO POLESE**



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# **THE 2021 NAPLES FORUM ON SERVICE**

A SERVICE LENS ON CHANGING BUSINESS AND SOCIETY

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# **The Active Customer in Value Co-Creation Processes: The Importance for Companies Using the Example of Energy Cooperatives**

*Ahlemeyer Kai*

**Purpose** - The aim of this work is to investigate the capabilities of an active customer and what he or she is able to provide better than an inactive customer along the five phases of the value creation process. Based on the example of energy cooperatives, concrete practical implications for the business models of energy cooperatives are derived.

**Design/Methodology/approach** - First, the paper analyzes and discusses the literature of the active customer with a focus on the value co-creation process. Second, empirical research based on 12 qualitative interviews is conducted and analyzed, adding to the discussion of co-creation in the context of energy cooperatives.

**Findings** - An 'Active Customer' is a person or group of persons in a defined market. The 'Active Customer' is willing to educate himself and acquire information in order to gain a differentiated view of the (specific) market/ market activities. The 'Active Customer' uses the acquired information to make conscious decisions after weighing the available options. The 'Active Customer' proactively exchanges information with other stakeholders in the (specific) market. In addition, the 'Active Customer' is a provider of intangible goods (knowledge, information).

**Research limitations/implications** - The research has certain limitations that require further research, for example, regarding the quantitative validation of the active customer. Future research should identify relevant indicators and describe different types of co-creation of the active and inactive customer in the energy sector.

**Practical implications (if applicable)** - In order for active customers to be able to participate appropriately in the process of co-creation, they need business models of energy cooperatives with low complexity, as multi-layered value creation stages in particular can overwhelm the active customer.

**Originality/value** - In the EU Directive 2019/944 (Clean Energy Package "Clean energy for all Europeans package"), the EU has described the 'Active Customer' as the basis for a sustainable energy transition. With this study, a concrete operationalization of the 'Active Customer' is possible in practice using the example of energy cooperatives on the basis of the value co-creation process.

**Key words** - Active Customer, S-D-Logic, Value Co-Creation, Customer integration

**Paper type** - Empirical and Conceptual paper

## AI and Emotions: a literature review

*Andreassen Tor, Del Vacchio Erica*

**Purpose** - Some studies (e.g., McCallum & Harrison, 1985) have defined service encounters as human interactions or dyadic exchanges between a customer and front-line employees. However, the evolution of the pandemic forced to an increase in technological/digital solutions; in some cases, productivity rose, but the *touch* side of the interaction certainly vanished. Both businesses and researchers have become aware of the crucial role of emotions/touch in service exchanges as it influences the engagement of consumers in service and co-creation of value (Solnet *et al.*, 2019). Thus, high-tech should be balanced with high touch, as already stated by marketing scholars (e.g., Anderson, 1995). Similarly, in a recent study, Rust and Huang (2021) identified two types of AI systems: low-feeling AI, capable to analyze text and emotional data, and high-feeling AI, namely a technology featured with emotion recognition and simulation. Therefore, attention to emotions may be facilitated by AI which, today, can read and ‘change’ the mind (De Keyser *et al.*, 2019). Hence, AI may increase high tech but at the same time may increase high touch. Indeed, firms should realize in which services or tasks this can happen. Although researchers have investigated the influence of AI and emotion in service encounters, extant studies are fragmented and disconnected, also because of the novelty of this topic. Our study answers the call for future research (e.g., Larivière *et al.*, 2017) and tries to better understand where does, if at all, emotions fit in AI.

**Methodology** - We carried out a systematic literature review of peer-reviewed articles in the past 29 years (1992-2021). First, we select only the articles in English present in the most used databases in the management field, Web of Science, Scopus and Science Direct (Tian *et al.*, 2018). Secondly, we choose a narrow search criterion using keywords (‘AI’, feeling\*, service\*, emotion\*) in the ‘topic’ of academic articles to limit ourselves to articles interested in addressing the issue under study. Finally, by analyzing the title, research results and conclusions of these selected articles, we choose only the most relevant sources related to the field of AI and emotions in service encounters. Based on total 51 paper, the authors identify key research and development patterns.

**First evidence** - Our findings reveal that most studies have focused on human-robot collaboration while recent research trends have focused on the use of emotions in decision-making processes. Further, current study show that tourism and hospitality are the industries where AI and emotion are relevant topics to manage service encounters. Findings show that the most used tools to collect emotional data and integrate them into one’s AI algorithms are 1) social networks, 2) face, speech, and image recognition, 3) neural networks. Current review highlight that there is a complex relationship between employees and their emotional intelligence and AI’s features (e.g., body, voice, human semblances etc..) in service encounters.

**Research limitation/implication** - In line with recent service literature, our analysis recognizes that emotions must be treated as a continuous phenomenon occurring within and outside the service context, where the experience of service encounters is linked to a broader human experience (Lemon and Verhoef, 2016; Fisk *et al.*, 2020; Huang and Rust, 2021a). Further, our review confirmed that AI’s ability to recognize human emotions supports employees in offering personalized services and emphasize emotional tasks and be people-oriented (es. Frey & Osborne, 2017; Huang and Rust, 2019, 2021b).

**Practical implication** - In a constantly updated service context, managers must be able to exploit the advantages of AI not only in terms of replacing human work but also for its ability to recognize emotions. Following this logic, AI can guide managers to provide emotional responses and service encounters based on communication, understanding and experience.

**Originality** - This work offers a better understanding of the impact of AI and emotion in service encounters. Through a systematic review of the literature, the role of AI and the emotion in service encounters were clarified, capturing the advantages and challenges still open.

**Keywords** - Artificial intelligence, AI feeling, service encounters, consumers, emotions

**Paper type** – Research paper

# Shaping the Scope and Features of an Innovation Community Through a Multiple Case Study

*Angrisani Mariarosalba, Dell'Anno Davide, Hockaday Tom*

**Purpose** – The paper aims at providing a novel perspective on Innovation Ecosystems (IE) by articulating the concept of Innovation Community (Hockaday, 2020) for the purpose of enriching the discourse on Innovation Systems (IS) and Knowledge Management (KM) processes. Our study moves from a recent conceptual analysis supporting a new definition of IE (Granstrand & Holgersson, 2020). By means of the insights presented in the mentioned analysis, the paper attempts to build a theoretical background to validate the main features and characteristics of an Innovation Community (IC).

In order to provide empirical evidence of our construct, an exploratory analysis is carried out by means of a multiple case study on four different entities namely, the University of the Rijeka (Croatia), the University of Mondragon (Spain), the University of Málaga (Spain), and the Oxford Innovation Society (OIS), UK.

**Design/Methodology/approach** – Our research is exploratory in nature (Creswell, 2014) therefore, two main research questions drive the investigation:

Rq1: According to the provided definitions of IE and IS, can an innovative environment where knowledge management processes occur be defined also in terms of Innovation Community (IC)?

Rq2: Whether and in which ways an environment involving academics and business actors can be described as an Innovation Community, alternatively to the IE approach?

To answer to our research questions, a multiple case study methodology (Yin, 2009) is performed on three Higher Education Institutions (HEIs) and on the Oxford Innovation Society OIS, an institution established by Oxford University Innovation (OUI) - Oxford University's technology transfer company- to provide a liaison between the private sector and academic communities and science. The sample is chosen following parameters regarding the diversity of their background according to the quadruple helix classification of Institution, Research, Society and Entrepreneurship (Leydesdorff, 2012).

The choice of the multiple units of analysis is motivated by the fact that, on one hand, the selected HEIs embody three examples of universities embedded in the community in which they operate, by synergically interacting with their respective social, institutional, and entrepreneurial contexts. On the other side, the OIS represents a community made up of a diverse set of academic and entrepreneurial agents gravitating round the Oxford University. The units of analysis have been selected according to a purposive criterion, falling within the non-probability sampling category (Patton, 1990). Such sampling allows to resort to the researchers' judgment to select cases that can provide valid answers to the research questions (Bryman & Bell, 2011).

Triangulation in the data (Yin, 2009; Patton, 1990) is achieved by examining multiple sources of data, i.e. in-depth interviews to a selected panel of respondents, surveys to validate the insights of the IDIs and further/additional documents, provided by the IDI informants of the four cases.

The first step of the empirical analysis concerns the detection and selection of the appropriate KPIs regarding the main patterns and features of an IC in comparisons to the provided definitions of IS, IE and networks and in relation to KM processes occurring within. The choice of categories is performed through an inductive approach, without the aid of predefined conceptual grids.

The initial themes guiding the analysis are selected through a literature review method and tested with an in-depth interview (IDI) submitted to one representative/key respondent of each of the four cases. Subsequently, the themes emerging from the IDI are validated by means of a survey submitted to a set of actors affiliated to three academic units of analysis. In the framework of the purposive sampling adopted in our study, interviewees for the survey are identified following a snowball fashion. At the end of the IDI we asked the HEIs respondents to recommend 15 to 20 colleagues from their respective institutions willing to participate in the survey.

The respondents are asked to elaborate on the preselected thematic areas that are coded in the analysis phase to draw KPIs able to refer to an IC as well as to KM patterns.

Data obtained by the IDI and the surveys are analysed through a thematic analysis (King, 2004). The data analysis is performed by means of a coding software to reveal the indicators and codes according to which the four cases can be referred to as an Innovation Community able to deal with knowledge management processes.

**Findings** – The outcomes of this early-stage study are meant to confirm the propositions according to which the IC view can acquire a theoretical relevance when referring to knowledge management contexts involving public, private, and institutional sectors.

**Originality/value** – The expected contribution of the research resides in providing a first validation of the IC as a valuable construct to be used to integrate or even substitute to the concept of IE.

Practical implications of our research pertain the availability of a further framework to adopt KM and technology transfer mechanisms in an innovation environment.

**Key words** (max 5): Innovation Ecosystems, Knowledge Management, Innovation Community, Technology Transfer

**Paper type** – Research paper

# Managing Contradictions between “Business as Usual” and Transition Dynamics in Service Ecosystems

*As'ad Nabila, Patrício Lia*

**Purpose** - Multiple service ecosystems are undergoing a process of transition, such as the transition of energy ecosystem towards distributed and carbon-free production and consumption. However, little is known on how actors can effectively manage the implications of such profound changes in service ecosystems (Kabadayi et al., 2020; Sigala, 2020). This paper explores the concept of contradictions (Hargrave and Van De Ven, 2009) that emerge in service ecosystems under transition, and how actors may embrace both “business as usual” and the profound changes in service ecosystems.

**Study design/methodology/approach** - This study adopts a qualitative approach (Charmaz, 2006) and abductive analysis (Tavory and Timmermans, 2014) with multiple actors in the energy sector. The study involved 31 in-depth interviews with four different groups of actors encompassing multiple levels of aggregation: (1) internal stakeholders of a utility provider; (2) external partners of the utility provider; (3) advanced customers of the utility provider; and (4) broader actors within the energy sector.

**Findings** - The findings revealed three types of contradictions between (1) governance model, and plurality of perspectives and interests; (2) internal and external resources; and (3) pressures for stability and change. These contradictions are closely interdependent, meaning that the approach taken to embrace one type may influence and/or being influenced by one another. This interdependence influences actors to gradually adopt a more both/and approaches, upon which they acknowledge that their complementarities are central for supporting the transition process towards clean energy.

**Originality/value** - This paper provides an in-depth empirical understanding of the contradictions (Hargrave and Van De Ven, 2009) that are latent in service ecosystems under transition, and how actors embrace these contradictions as a source of creative tension to cope and influence the profound service ecosystem changes.

**Keywords** - service ecosystem, transition, contradictions

# **How utility sector intermediaries facilitate ESCO market development through value co-creation: A case study of Sharjah Electricity & Water Authority (SEWA), UAE**

*Badi Sulafa*

The growth of energy service companies (ESCOs) markets in the private sector is restricted by a fragmented and highly uncertain market and customers who are often unknowledgeable and unwilling. This study explores the potential role of public sector utility companies as intermediaries connecting supply-side ESCOs with potential demand-side customers in a manner that ensures customer satisfaction. The paper adopts a customer-centric, service-dominant logic perspective to examine how a utility company facilitates value co-creation in an in-depth case study of an extensive retrofit program in the Emirate of Sharjah, United Arab Emirates. The findings underline several value co-creation roles associated with the utility company intermediary, including relationship-enabling, communication-enabling and knowledge-enabling. The paper concludes with recommendations on how utility companies can facilitate the co-creation of value at the ESCO-customer interface and hence, support ESCO markets' development towards decarbonising the built environment.

**Keywords** - energy service companies (ESCOs), energy service market, utility company, intermediary, private sector customer, value co-creation, triad, case study, United Arab Emirates



# Intelligent agents and ecostructuring decisions in service journeys

*Badinelli Ralph*

**Purpose** - The purpose of this paper is the derivation of design principles for smart Service Support Systems (SSS). An SSS is a personalized, intelligent decision support system for navigating a service journey (Badinelli 2021). The development of smart SSS's is a natural next step in the quest for more efficient and effective service systems (Barile & Polese 2010). The soon-to-be ubiquitous applications of artificial intelligence (AI) and big data analytics (BDA) in resource-aggregating service systems motivates an investigation into the benefits and limitations of these systems (Langley et al 2020). The paper extends the author's previous research in the role of actor engagement decisions as the mechanism for determining the trajectory of an actor's service journey (Badinelli et al 2019). We model each engagement as an ecostructuring decision followed by a commitment decision. The focus of this paper is the joint support of the ecostructuring decision by the individual actor and the intelligent SSS.

**Methodology** - The principal methodology of this research is decision analytics. Specifically, we begin with a model of an actor's service journey as a sequential decision process (SDP). This process incorporates the actor's opportunities to explore service ecostructures for their service potential and opportunities to exploit service ecostructures for value cocreation (Badinelli et al 2012). At each juncture of the SDP, the actor and the SSS agent must learn from previous engagements and adapt the ecostructure to the evolving value structure and knowledge base of the actor. We examine the salient methodologies for decision support in SSS's to date. The multi-armed bandit (MAB) decision model has become a favorite of online service systems that present an actor with an assortment of options for the service ecostructure based on a probabilistic assessment of the actor's preferences. Similarly, Bayesian decision models are often used to describe rational sequential decision processes. We also consider heuristic decision rules as options for the actor. Computer simulation is a methodology that allows experimental testing of our theoretical results and conjectures.

**Results** - We identify a potential learning gap between an actor and an SSS with the following implications.

- Synchronizing an actor's SDP and that of a smart SSS can be impossible in many cases.
- The actor's actions that are independent of the SSS make the actor's journey only partially observable to the SSS.
- The limitations of an SSS call into question the viability of micro services, aggregation services, intelligent service support systems (Barile & Polese 2010, Golinelli 2010).
- Overcoming the limitations of an SSS through more sophisticated analytics could introduce coupling across the stages of a service journey which could threaten the scalability, evolvability and observability of the SSS (DeBruyn 2014, Mannaert, H. and Verelst, J. 2009).

**Research Limitations** - The research is theoretical and would benefit from empirical support.

**Practical Implications** - This research provides recommendations for the future development and deployment of intelligent agents in smart service systems.

**Originality/Value** - This paper presents an evaluation of smart service systems at an operational level. Benefits and limitations of intelligent agents in service support systems are revealed. Results are supported by analytical models of ecostructure decisions.

**Key Words** - service ecostructure, service support system, decision analytics, Viable Systems Approach, subjective logic

**Paper Type** - Research paper – Service Science, Network and Systems Theory.

# Sustainable Services for Healthcare Value Cycle Delivery in the time of Pandemic

*Badr Nabil Georges, Carrubbo Luca, Tanniru Mohan*

**Purpose** - The world was not prepared for a Pandemic such as COVID-19, which caused a severe impact to the Healthcare complex service ecosystem, disrupting the value chain [1].

“In a well-functioning health care system, the creation of value for patients should determine the rewards for all other actors in the system” [Porter, 2010, p.2477]. The integration of these direct and indirect actors, with their activities and interactions, contributes to enabling the value proposition of the service [Vargo et al, 2017]. Value measurement in general is at the consumer’s vantage point, in a Pandemic, the consumer is the whole ecosystem. Public health 3.0 research argues for the public health to re-envision itself to become *population ecosystem centric*, i.e. leverage cross-sector collaboration to assess how environmental, policy, and system level actions influence the social determinants of health of individual population groups or become community centric [DeSalvo et al, 2016].

Disruptive events, such as the COVID pandemic, introduce impediments to value creation due to the use of imprecise information from value-in-use to tailor practices, and reduction in capabilities of value fulfillment due to inadequate communication of information and misalignment of goals of actors used to disseminate and influence practice adherence. Therefore, our aim is to explore a Value Cycle Framework, to integrate resources and capabilities and to fulfill the sustainability agenda of healthcare for all, in the context of pandemic health disaster management.

**Methods** - Service innovation research emphasizes the need to use each instance of value creation to learn and transform the way firms integrate its actors and resources to create new value [Lusch et al, 2015]. This becomes a challenge for public health agencies as value created through preventive practices is fulfilled by a partner network with many external actors, clinical and non-clinical, and value-in-use feedback to begin the next value cycle is often lacking in precision and timing for epidemiological analysis [Tanniru, 2020].

Grounded in the concepts of service science, we develop a Value Cycle Framework, to fulfill the sustainability agenda of healthcare for all. Then, we apply the lens of the SENDAI framework for Disaster risk reduction, to refine our theoretical framework in the context of pandemic health disaster management [Aitsi-Selmi, 2015].

**Findings** - When we overlay the disaster risk reduction and the value cycle delivery frameworks, we learn that, by understanding health inequities, through dimensions of socio and economic vulnerability, personal capacity and exposure to personal safety, we can start to understand the ensuing risks that expose the system to value erosion through compromised ability to coordinate the resources.

In order to maintain the sustainability of value producing functions and continuity of services in the healthcare ecosystem, value transformation is necessary to adapt to the changing conditions. Sustainability, in this case of a health disaster event, would require a structured approach to service continuity, through prevention, care coordination, preparation for successful response, and enhancing resilience and rehabilitation.

We also recognize that strengthening the governance of population health to manage health inequities, could create the environment of awareness and incentive necessary for the public and private sector to interact and curb the increased challenges and reduce the strain on the resources in the system.

This work also the importance of enhancing population health by effectively coordinating continuity of care prevention, preparing for successful health treatment, and recovery post-hospital discharge in support of care transition.

**Originality/Implications** - The topic may not be an original topic, however using the lens of this paper, we produce a work that connects the value creating services to the value fulfilling services in the context of Disaster Risk Reduction – at each of the goals / targets / priorities of action defined in the SENDAI framework. We therefore propose a refined Value Cycle Framework to inform actors in a Health Ecosystem on aligning the priorities between value creating and value fulfilling services to prevent new and reduce existing disaster risk through the alignment of these services. As guidance for proper integration of resources for sustainability and value alignment, the contribution of our paper is expected to be surely in the scope of identifying critical services for value cycle delivery i.e. sustainability of the Healthcare ecosystem, and prepare it for a time of pandemic.

**Keywords** - Sustainability, Healthcare ecosystem, Value Cycle

## Insights from T-Shaped Professional (T-SP) Model to support human-machine interaction

*Bassano Clara, Leitner Christine, Ganz Walter, Satterfield Debra, Piciocchi Paolo, Spohrer James C.*

**Purpose** – Human resources are the key to rapid socio-economic development and efficient service delivery (Onah, 2008). Without an adequate, skilled and well-motivated workforce operating within a sound human resource management programme, development is not possible (Griffin 1997). Every educational system at every level depends heavily on the human resources for execution of its programme. Although the introduction of innovative approaches in education programs inspired by the T-Shaped Model (Saviano et al., 2016; Barile et al., 2015), past studies did not investigate the importance to develop T-shaped skills and techniques for aligning human machine learning (Spohrer, J., Banavar, G 2015) and to design more intuitive machine interfaces. The aim of the paper, thus, is to better formalize the T-Shaped Professional (T-SP) model to support human-machine interaction in order to understand the characteristics that people must have to interact effectively with smart machines realizing the wise evolution of service systems (Barile *et al.*, 2019).

**Design/Methodology/approach** – Given our purpose, we propose a trans-disciplinary approach based on Service Science (SS) and Viable Systems Approach (VSA) as frameworks for rethinking the actual T-Shaped Professionals (T-SP) Model in which vertical expertise is combined with horizontal and cross-sectional knowledge (Spohrer & Maglio, 2010; Demirkan & Spohrer, 2015; Freund 2018; Moghaddam, Demirkan, and Spohrer 2018; Gardner & Maietta 2020) keeping into consideration the impact of the digital transformation on workforce's personal and intellectual habits that is now gradually underway.

**Findings** – People will need both emotional and social intelligence as well as increased technology-assisted rational intelligence to create a wise system. While rational intelligence and technical/hard skills will be useful to verify the reliability of a result produced by intelligent machines, the social and emotional intelligences (Goleman, D., 1995) will serve to verify the adaptability to the context of the solutions identified by the machines. In fact, they ensure the development of: i) *intrapersonal* (emotional) *skills*: understanding of one's own values, awareness of one's knowledge/awareness, flexibility, self-management; ii) *interpersonal skills* (social): relationships with others (including intelligent machines), understanding of other people's values/empathy, active listening/communication, cooperation; iii) *inter-generational skills* for thinking long-term about the implications of today's decisions to future generation, especially decisions that impact the resilience of future generations (ability to rapidly rebuild from scratch after catastrophes). Furthermore, in the era of digital workers (smartphone apps grown up), people and other service system entities investing in learning and upskilling is key.

**Practical implications** – In this study we focus on the skills that people must have to support human and machine interactions. This does not mean that people have to only develop technical skills to understand the complex algorithms of the machines, rather that they need to also develop creative abilities, relational and social skills, therefore, they need horizontal competencies to fill in for the machine's gaps so as to be able to operate for the benefit of the system. Furthermore, people will need to improve their analytical and critical senses and be able to understand the belief system in which the machine operates (its behavior, operational boundaries, and limitations) as well as its intentions (Degani et al., 2017). In this way, the human partner will be able to adapt the profound skills of a machine to the social environment in which it operates, ensuring intelligent decisions that benefit the current generation and wise decisions that benefit future generations (as judged by future generations). Policy makers will have to adopt an education policy aimed at preparing T-Shaped Professionals (T-SP) of the future; a collaborative policy to promote the virtuous and circular collaboration between humans and machines. At the same time, universities and researchers can play

a key role by engaging with policy makers to design smarter and wiser human-centered service systems; driving new knowledge creation and stimulating quality of life progress for everyone, including the weakest in society.

In addition, service system entities are responsible entities (such as people, families, businesses, universities, cities, regional governments). Being responsible means becoming more conscious and explicit about learning investments. All responsible entities are constantly learning (AKA “upskilling”) by tacitly investing in exploration (doing things in new ways) and exploitation (doing things in habitual, entrenched, routine ways). The practice of service science is the process of building a Service Innovation Roadmap (SIR) for each entity (Spohrer 2021). A SIR summarizes a responsible entities’ learning investments, or plan for “upskilling”. A SIR is a practical thing – a kind of Business Model Canvas for learning investments that responsible service system entities make. Furthermore, we divide the types of investment into three parts (1) Run (individual habits, enterprise routine operations), (2) Transform (copy best strategies from other entities, largely by finding high performing individual role models and/or enterprise competitors and following in their strategic footsteps or path), (3) Innovate (invent your own new best strategy or best practice). The tool of service science is complexity economics; modeling entities and their changing strategies. Complexity economics models and runs simulations to see what possible futures might exist, when strategic interactions are driving change. Policy can then be invented to make some possible futures more likely than others. However, because entities change their strategies as they are interacting, predicting the future is not possible.

**Originality/value** – The paper, in spite of its limits, offers interesting reflections for debate on the need to propose a T-SP model optimized for the era of intelligent machines that should possess a proactive attitude, creativity, change management orientation, understanding of complex situations, and negotiation skills. As technology races ahead, the demand for workers with social emotional learning skills also increases, because these skills are not yet susceptible to computerization (Frey, C.B. and Osborne, 2017) and can exceed the limits of intelligent machines, also known as the rapidly growing digital workforce each person can access (Piciocchi et al., 2019).

**Key words** – Human-Machine Interaction, Service Science, Viable Systems Approach, T-Shaped Model.

**Paper type** – Conceptual paper

# **Towards an Intra-Ecosystem perspective for Value Co-creation: How Resources are integrated within and across Ecosystems?**

*Ben Letaifa Soumaya, Edvardsson Bo*

**Background** – Resource integration is shaped by a diversity of collaborating actors, with access to different resources in service ecosystems. Asymmetry rather than symmetry is the reason why actors join forces to form sets of resources, needed for innovative, creative resources integration. This is done in the context of institutional arrangements, providing the rules of the game at the micro, meso and macro level of an ecosystem. However, actors and resources can also be included or integrated from other ecosystems. This intra-ecosystem interaction and resource integration has not been theorized on and needs further theoretical development and can benefit from e.g. include theory on boundary objects and boundary spanning.

**Purpose** – This paper explores how value co-creation are driven by multiple actors, engaged in resource integration within but also between service ecosystems.

**Design/Methodology/approach** – A qualitative ecosystemic approach allows to grasp the interactions between ecosystems. Interviews with actors at different layers provide extensive narratives on “resourceness” and how potential value is leveraged into captured value. A case study on Tourism, social economy, handicraft and airline transport ecosystems allow to grasp how these four ecosystems integrate their resources in order to shape a comprehensive value proposition.

**Findings** – The liquefaction of resources within an ecosystem can be leveraged by opening up to other ecosystems actors and resources. Indeed, value creation process is fulfilled once the customer experience is not limited by the boundaries of a specific ecosystem.

**Practical implications (if applicable)** – A broader ecosystemic approach is required for service dominant logic. An inter-ecosystemic perspective in marketing and management grasps the reality of value creation and reveals how customer experience transcends traditional service conceptualizations.

**Originality/value** – This paper innovates by exploring new level of analysis (resources integration within four distinctive, yet connected ecosystems). It highlights the need for more macro level analysis to understand how value is created and captured for end-users.

**Key words** (max 5) - ecosystem, resource, integration, collaboration

**Paper type** – Research paper

# **Managing emergency through resilience: reinterpreting smart cities as service ecosystems view**

*Botti Antonio, Grimaldi Mara*

**Purpose** - The study investigates the enabling factors of resilience as a key lever to address complexity in urban context, challenge technological evolution and foster growth. The goal is to explore the determinants of resilience to understand how smart cities can seize opportunities for innovation starting from disruptive event through the right combination of technology, human and social capital. Resilient smart cities can challenge environmental changes and develop proactive behaviors that encourage the attainment of social, economic and environmental well-being.

**Design/methodology** - Therefore, being resilient entails the redefinition of orientation, business models, technology and resource allocation to turn global crisis (such as Covid-19 pandemic) into an opportunity for development. Given the need to clarify the key determinants of resilient in contemporary cities, this article aims at exploring: 1) the main drivers for resilience to challenge global crisis; 2) how the drivers for resilience can be activated and combined to create opportunities for innovation. The empirical research is based on a content analysis that explores the case study of Italian smart cities. The goal is to identify the drivers that are helping Italian cities develop proactive and resilient attitude to challenge the current epidemic.

**Findings** - The results allow the introduction of a framework that identifies the determinants of resilience according to an exploratory approach, in which the smart ecosystem's enablers developed by Italian smart cities are classified to obtain some macro-dimensions and to design a framework that detects the key enabling factors for resilience, for cities transformation and for the exploitation of innovation.

**Research implications** - The study can show management the main enabling factors to address crises, such as the global emergency of Covid-19, and how these elements can be harmonized to attain systems continuous re-adaptation that fosters innovation and that lead, in turn, to resilience. The categorization of the new interaction modalities and main strategies to challenge the pandemic developed in smart cities can help scholars and practitioners to shed light on the key drivers to overcome social and economic crisis.

**Originality/Value** - The proposal of a model that explores how technology can redefine humans' interactions and foster resilience in smart cities can address a gap in literature related to the absence of studies exploring the role of ICT in reframing traditional cities management and social innovation. The conceptual framework supports the identification of: 1) the main technology tools for smart cities to challenge the pandemic; 2) the key elements of the complex process of redefinition of actor's interactions and resources integration modalities; 3) the key determinants of resilience as a result of the ecosystem's transformation.

**Keywords** - service ecosystems view, smart cities, value co-creation, resilience, innovation

## Scanning of the retail environment in forecasting activities

*Bozic Maja, Moretta Tartaglione Andrea*

**Purpose** - To boost store performance and manage complexity caused by information and task overload, retail managers are focusing on the optimization of processes, efficient practices and facilitating tools. The aim of this research is to highlight the drivers from complex and uncertain environments affecting retail-forecasting activities.

**Design/Methodology/Approach** - Putting together the traditional concept of environment reflecting on the scanning, uncertainty, and complexity, with social network analysis on citation data it outlines studies that investigate environmental drivers affecting the forecasting process in the retail business.

**Findings** - It is created the theoretical framework of the external drivers emerging the concept of complexity and uncertainty of the environment in retailing. The decision-maker needs to scan and filter the right patterns defining the causal relationships between environmental drivers and forecasting model in retail.

**Practical implications** - Highlighting the inherent limits to forecasting, showing that evolution of forecasting methods is necessary and the environmental aspect is opening up new paths to reveal important insights to assist decision-making.

**Originality** - Representation of a retail environment where a change from past research which generalizes the concept of the environment as complex, uncertain, and dynamic moves to recent trends where the retail environment has been seen as heterogeneous, affected by the level of the intensity and hostility of competition, with the necessity for the continuous scanning of the environment.

**Keywords** – environment, retail, scanning, uncertainty, complexity, forecasting, drivers

## **From the individual to the collective: conceptualizing the collective actor experience**

*Braz Becker Larissa C., Helkkula Anu, Karpen Ingo, Kleinaltenkamp Michael, Jaakkola Elina, Nuutinen Maaria*

**Purpose** - Actor experience is a central concept in service-dominant (S-D) logic as value is always phenomenologically determined by a beneficiary. Due to the actor-to-actor (A2A) perspective, these beneficiaries can be individual (e.g., a customer) or collective actors (e.g., families, firms, nations). As phenomenology focuses on experiences of individual, conscious subjects, the purpose of this paper is to examine if and how the S-D logic notion of generic actor can be reconciled with the phenomenological perspective on experience.

**Study design/methodology/approach** - This conceptual study relies on the literature of collective experiences based on the phenomenological approach.

**Findings** - The study conceptualizes collective experiences as a special mode of phenomenological experiences (a) given in an individual's consciousness, (b) in the "we"-form (i.e., in the name of a collective actor), and (c) that are believed to be shared among the members of a collective actor. It also differentiates collective experience from related concepts such as intersubjective experience, co-created experience, and shared experience.

**Research implications/limitations** - The conceptualization of collective experiences reconciles the phenomenological and the A2A perspective solving a theoretical conflict in S-D logic. It enables a better understanding of many collective service phenomena, such as business-to-business customer experience.

**Practical implications** - Advancing the understanding of collective experiences helps practitioners clarify and avoid potentially ill-guided assumptions around their nature and perceived (ir)reality. In so doing, our research challenges managers to carefully consider the degree to which decisions are indeed representative of collective actors and their (desired) experiences (e.g., organizational buyers).

**Originality/value** - This study is the first to conceptualize collective experiences in service through a phenomenological perspective, thus, providing an original contribution that advances the S-D logic narrative.



## More Than a Snapshot: Dynamic Value-in-Use Emergence in E-Services

*Bulawa Nicole, Jacob Frank*

**Purpose** – The modeling of technology-based services is becoming increasingly complex, as these services can now be customized according to customers' individual usage processes and goal pursuits (Cho & Menor, 2010). Whereas service modeling thus far has focused on customer behavior and experiences (e.g., Howard & Sheth, 1969; Lemon & Verhoef, 2016; Neslin et al., 2006), the authors adopt the view that service modeling focused on value-in-use (ViU) emergence potential is necessary.

**Design/Methodology/approach** – This study uses a qualitative approach to investigate how ViU emerges in the course of a use process and what factors influence ViU emergence in the context of language learning applications. To this end, episodic interviews are used due to their suitability for the reconstruction of past episodes in the form of a narration (Jovchelovitch & Bauer, 2000).

**Findings** – By extending service-dominant logic with regulatory mode theory, the authors discover a ViU emergence process consisting of eight stages, ranging from initial trigger to termination. The findings suggest that the course of the ViU emergence process is subject to assessments and movements within the process. Assessment processes, thereby, go beyond ViU assessments and also encompass the following influencing factors: goals, resources, and usage intensity.

**Research limitations/implications (if applicable)** – The study illustrates the dynamic course of the ViU emergence process in terms of a usage process and provides a more refined elaboration of the influencing factors: goals, resources, and usage intensity. Future research might be needed to explore the study's applicability in other usage processes.

**Practical implications (if applicable)** – By examining a customer's overt usage, assessments and movements, practitioners can pinpoint where a customer is located in the ViU emergence process, so that appropriate measures can be taken to further promote customers' ViU emergence through e-service design.

**Originality/value** – This paper contributes to the general understanding of longitudinal and dynamic ViU processes in e-services by focusing on a customer's goals and processes. In addition, this research also extends goals, resources, and usage intensity through the identification of multiple sub-dimensions and their influence on dynamic ViU emergence.

**Key words** (max 5) Value-in-use emergence, e-services, service-dominant-logic, regulatory mode theory, mobile application usage

**Paper type** – Research paper

# Healthcare innovation: digitisation and citizen participation for service improvement

*Cavacece Ylenia, Russo Giuseppe*

**Purpose** – The Covid-19 pandemic created a health emergency in all countries, highlighting the weaknesses of each healthcare system. The actions planned for the near future seem to converge on two important interventions: accelerating the process of digitisation and promoting the active participation of citizens.

The paradigm of Service-Dominant logic provides several interesting contributions about the value co-creation in healthcare. Although scholars agree in recognising the advantages, there is still confusion about the best strategies for citizens involvement and the variables affecting their participation behaviours. According to Service Science, the emergence of new digital tools provides new sources of information and new ways of interaction, involvement, and participation. Based on these assumptions, the aim of this paper is to investigate the factors influencing an effective citizen participation strategy based on digital tools.

**Design/Methodology/approach** – This work is based on an empirical investigation. According to the results of the literature review, we hypothesised that health literacy and patient empowerment have positive effects on citizens' value co-creation behaviours through digital tools. The hypotheses were tested through the administration of a questionnaire to a sample of Italian citizens. Results were analysed using the linear regression method. In addition, the questionnaire investigated the main reasons for and against the use of some digital tools introduced in the Italian healthcare system, among which the electronic health record and the App for the tracking of Covid-19 infections.

**Findings** – The results show that citizens with higher levels of health literacy and patient empowerment are more likely to engage in value co-creation behaviours with health professionals. Many of the digital tools introduced in the Italian healthcare are poorly used by citizens. Among the main reasons against their adoption there are a lack of knowledge of them, the apprehension of privacy violation, and a low perceived usefulness.

**Managerial implications** – Policy makers should introduce specific education and training programs aimed at increasing health literacy and empowerment of citizens in order to involve them in healthcare management. Digital tools can facilitate value co-creation processes, but they need to be promoted more also highlighting their usefulness and reassuring users about privacy protection.

**Originality/value** – Although several studies highlight the advantages of citizen engagement and digitisation of health services, there is a lack of evidence on the factors that influence, both positively and negatively, these processes.

**Keywords** - Value co-creation, Service Science, Service-Dominant logic, empowerment, health literacy, digitisation

**Paper type** – Research paper

# **Fairness Perceptions of Customer Participation in Augmented Reality-Enabled Online Services**

*Christ-Brendemühl Sonja, Schaarschmidt Mario*

**Purpose** – An increasing number of retailers tries to engage customers by embedding augmented reality (AR) features such as video try-on into the online shopping experience. As such technology-based services require higher levels of customer participation than branch store experiences, this paper aims at investigating associated fairness perceptions and behavioral intentions of customers.

**Methodology** – The conceptual framework is based on equity theory. To compare customer responses after a branch store purchase as opposed to an AR-enabled online purchase, this study contains a 2x2 between-subject online experiment, in which respondents were randomly allocated to scenarios. Additionally, it is considered how cross-channel price comparison affects customer responses.

**Findings** – The data analysis demonstrates that participants in the video try-on scenarios report significantly lower levels of distributive, procedural, and price fairness as well as lower engagement intentions. Simultaneously, they report higher negative word-of-mouth intentions, particularly when a subsequent price comparison reveals that the same item is sold at a lower price in one of the retailer's branch stores.

**Research implications** – Higher levels of customer participation for AR-enabled online services are not compensated by higher convenience or other benefits.

**Practical implications** – Service managers should design AR applications in a manner that requires minimum customer participation.

**Originality** – This study contributes to service research by linking customer fairness perceptions and their outcomes to different levels of customer participation. This is vital to fully exploit the potential of AR in services.

**Keywords** – Customer participation, fairness, augmented reality, engagement intention, negative word-of-mouth, equity theory

**Paper type** – Research paper

## **Developing a Microsoft Teams usability index in Higher Education Organizations: a Service-Dominant Logic orientation**

*Ciasullo Maria V., Capolupo Nicola, Romeo Emilia*

**Purpose** – The Covid-19 pandemic amplified the need for Service-Dominant Logic scholars to investigate the adoption of technologies which enhance relation building, group interactions, knowledge sharing and creation across organizational and geographic boundaries. The social distances imposed by the current pandemic spurred, in fact, Higher Education Organizations (HEOs) to rethink their delivery and use services. E-learning has, therefore, become the vector of the relationship between the organization and the “consumers” of those services. This underlines the need to focus on essential service provision, and on the technological means to deliver them. Never as much as in this moment, it is necessary that e-learning tools know-how is balanced and shared by both the service provider (teacher) and user (student). Otherwise, asymmetrical interactions with e-learning platforms could generate critical issue on judging both quality and contents of the service itself. Therefore, the aim of this study is to build a Microsoft Teams usability self-assessment index to be used in future quantitative researches. To provide the academy with an empirical tool on its use, the research proposes an in-depth exploration of Teams basic components, because of its current adoption within different HEOs for the service education use and delivery.

**Design/Methodology/approach** – To generate a reliable index, authors will explore Microsoft Teams basic functions, investigating primary data resources, i.e. the official guide provided by the Microsoft support. Nevertheless, the index should be considered “relative” since is designed to measure individuals’ skills and competences that belong to similar knowledge areas (i.e. same university departments) and that share the same basic background in both service delivery and use of Microsoft Teams in HE.

**Findings** – The expected theoretical outcome allows to develop an Italian version of the measurement scale index of Microsoft Teams usability self-assessment in HEOs, to be used for future empirical measurements of students’ engagement in learning service co-creation.

**Research limitations** – Due to the contemporaneity of the events and the lack of empirical studies, the index is not completely deducible from the literature and, therefore, requires a longer validation process, and a more practitioner-oriented approach. Furthermore, it cannot be universally conceived and applied to the whole totality of students and teachers within HEOs.

**Practical implications (if applicable)** – The main practical outcome consists of setting up a self-assessment index to measure the perceived usability of Microsoft Teams in the education service delivery, which has a crucial impact in the co-design process together with students.

**Originality/value** – Given the literature gap in measuring Microsoft Teams usability, this index will be tested - combined with other tools for assessing the utility perceived - for further empirical investigations into the HEOs ecosystem.

**Key words** – Microsoft Teams, Service Dominant Logic, Higher Education Organization, Higher Education, e-learning

**Paper type** – Research paper

# Unveiling value co-creation within the digital servitization business models: Empirical evidence from B2B industrial firms

*Ciasullo Maria V., Montera Raffaella, Douglas Alexander*

**Purpose** – Since servitization entails increased awareness of the co-creation phenomenon (Kowalkowski & Ulaga, 2017), the paper aims to investigate the value co-creation within business models of industrial organizations that have undertaken servitization strategy. To fulfil this purpose, the research question addresses how value co-creation is encapsulated in the different archetypes of product-service system (PSS) business models.

**Design/Methodology/approach** – A survey is conducted on a sample of Italian industrial firms, whose offering comprises services. Sample companies are grouped by PSS business models, that are classified by using the widely accepted categorization in three archetypes, such as product-, use-, and result-oriented PSS (Yang & Evans, 2019). In a next step, value co-creation is measured and assessed for each PSS business model by adopting the DART (dialogue, access, risk assessment and transparency) scale (Albinsson *et al.*, 2016).

**Findings** – The research results support the close link between value co-creation and servitization, that is essentially a co-creation endeavor involving provider and customer spheres (Carlborg *et al.*, 2018). Value co-creation is encapsulated in all different archetypes of PSS business models. Anyway, result-oriented PSS business model shows the higher score of value co-creation. This means that a deep collaboration provider/customer is more stressed when the servitized business model is designed around integrated solutions.

**Research limitations** – PSS business models are not investigated at a fine granularity level because the work does not shed light on the building blocks of each archetype. In addition, Italy as study setting and the focus on business to consumer could reduce the generalization of results.

**Practical implications** – By providing a ranking of the PSS business models according to the value co-creation score, the management is facilitated in designing and redesigning business models of industrial firms to better respond to the strategic imperative of servitization, simultaneously exploiting the benefits of value co-creation.

**Originality/value** – The paper enriches the body of knowledge on the emerging topic of value co-creation within the servitized business models of industrial firms. The main contribution lies in the identification of a new hybrid archetype that arises from the combination of the DART dimensions with the higher score of value co-creation in each PSS business model considered.

**Key words** – Value co-creation; Servitized business models; Product-service system business model archetypes; DART model

**Paper type** - Research paper

## **The role of social media and technology in strengthening the insurance brand**

*Coviello Antonio*

Digimind's recent report on the social presence of Italian insurance companies, passing the Net as a listening function, has highlighted the insurance brands that are most involved in conversations, through mentions, in a spontaneous manner and by user initiative.

New technologies, such as the emergence of smart devices and applications, have increased the frequency and quality of communication between people and things, including in the insurance sector. Social media platforms and sharing economy concepts, are transforming the ways and methods of innovation, changing insurance business models and intensifying the demand for new products and distribution channels.

New technologies and trends are driving insurers to either transform themselves or risk falling behind new competitors.

Buzz marketing, then, can be understood as an unconventional technique used in the short term to draw the attention of a certain target audience to a particular issue, product or service, not only by talking about it, but also by fueling discussion about it.

In part, surprisingly, the study in question confirmed that sponsorship appears to be very useful to the insurance brand, at least in terms of visibility and resonance and regardless of the type of event in question, be it sporting or cultural.

**Keyword:** service innovation, social media, insurance marketing

## **Logistics service providers offering specialized fine-art logistics solutions: case study analysis**

*Cozzolino Alessandra, Calabrese Mario, Massaroni Enrico*

The logistics activities regarding the movement of fine art have grown considerably in value, volume and complexity at global level, confirming its strategic and economic importance, referring both to art of ancient and priceless artistic heritage, and also the one by modern and contemporary artists. Those activities require considerable competence and extreme quality: specialized logistics solutions offered by specific logistics service providers (LSPs) are needed. The aim of the research is then to investigate what are the specialized solutions currently offered in fine art market by LSPs. Solutions for the movement of fine art were collected from the main LSPs on the field, analysed through a qualitative content analysis, and classified in an original framework. This study may be of particular interest to both academics and professionals in logistics and supply chain networks serving fine art markets.

**Keywords** - Specialized logistics services, Fine-art logistics, Logistics service providers (LSPs), Supply chain network

# Smart fruition of archaeological heritage: evidence from great cultural attractors

*D'Auria Anna, Bifulco Francesco*

**Purpose** – Digital transformation of services is nowadays a hot topic in the scientific debate, and scholars, practitioners, and institutions are giving attention to the digital transformation in cultural heritage (Cuomo et al., 2021; Li, 2020; Russo-Spena et al., 2021). Linkages between cultural heritage and territorial competitiveness is frequently investigated in studies on cultural tourism; indeed, innovative solutions and new value propositions in cultural heritage can also benefit the deployment of other traditional in cultural tourism (Alvarez et al., 2010; Garau, 2017; Njovo and Makacha, 2018; Bigné and Decrop, 2019). Furthermore, special interest is paid to the smart technologies and the adoption of digital devices to enhance visitors' experience allowing people to interact with the artworks (Cuomo et al., 2017; Christidou, 2018; Koutsabasis and Vosinakis, 2018). Indeed, intelligent initiatives through the application of technological tools lead to the creation of novel value proposition as well as new forms of fruition (Ciasullo et al., 2016; Li, 2020; Cuomo et al., 2021; Russo-Spena et al., 2021), more participative than in the past and based on opportunities of customization of the information flows and the experience itself, also favouring the improvement of territorial competitiveness and the strengthening of the local identity. In this scenario, the present study focuses on the digital transformation of the archaeological heritage, aiming at contributing to reduce a gap in the literature, since most of publications on digital transformation in cultural heritage focus on museums and events management (Charitonos et al., 2012; Jones, 2012; Koutsabasis and Vosinakis, 2018).

**Methodology** – First, we chose to pay attention to the theoretical side of both value proposition through digital initiatives and the digital engagement of visitors to enhance their experience (King et al., 2016; Mohd et al., 2020). Following, we focus on the digital solutions in archaeological heritage fruition, presenting some representative case studies. We chose to investigate some great cultural attractors as demonstrators of how digital transformation can change cultural firms management and activities. In detail, to select the case studies we used a list provided by the Italian Ministry of Culture, selecting the cultural sites on the basis of both the relevance and the results of the innovative initiatives they carried on.

**Findings** – Cultural heritage is even more conceived as a resource to improve territorial competitiveness (D'Auria, 2014; Camagni, 2017) and, in line with this, optimizing the fruition is a goal for cultural institutions and professionals, looking for new and innovative forms of fruition of the archaeological heritage. Practical evidence shows that national and international institutions are gradually becoming aware of the potentialities of this sector proposing projects and initiatives to exploit and valorise archaeological resources. Most of the initiatives are based on the use of social and mobile technologies and the implementation of tools as beacons, smart crickets, GPS and Wi-Fi (Inoue et al., 2009; Charitonos et al., 2012; Dudhane and Pitambare, 2015). These tools are mainly used to collect data and provide visitors with information about the site, guiding them in their visiting experience, and allowing them to interact directly with the artworks (Cuomo et al., 2017; Christidou, 2018; Koutsabasis and Vosinakis, 2018), as well as to express their preferences shaping a visit path. Despite the growing interest in the topic, the digital transformation of the archaeological heritage is still scarcely investigated. For hence, it is still hard to detect how and how much new technologies and innovative digital solutions are benefiting the sector.

**Research limitations/implications** – Digital transformation is by now recognized as an effective way to improve the provision and fruition of services (Ciasullo et al., 2016; Cuomo et al., 2021; Li, 2020; Russo-Spena et al., 2021). Indeed, contributions on this theme are growing in number but there is still a lot to do in practice, especially in cultural heritage, although evidence highlights the potential of the implementation of innovative solutions and digital technologies (Charitonos et al., 2012). Literature on digital transformation can represent a resource for institutions and practitioners aiming at valorising the archaeological sector, but further theoretical and empirical research is needed to offer concrete insights and effective solutions.

**Originality/value** – This paper can be framed in the international debate on the digitalization of services and, in particular, on the digitalization of the cultural heritage to improve the fruition and enhance visitors' experience. The study represents a contribution to the academic literature as the research focused on the digital solution for the fruition of the archaeological heritage is still scarce.

**Keywords** – archaeological heritage, digital transformation, intelligent solutions, cultural attractors, visitors' experience

**Paper type** – Research paper



## **Stakeholder Engagement: constitutive practices of value co-creation**

*De Marco Salvatore, Storlazzi Alessandra*

**Purpose** - The service dominant logic investigates on articulated specification of the mechanisms of coordination and cooperation involved in the cocreation of value through markets and, more broadly, in society (Vargo e Lush 2016). This is especially important because markets are more about cooperation than about competition, which, however, is more frequently discussed. The paper collects the stakeholder engagement practices adopted by those Italian companies that publish the social report by adhering to the guidelines of the Global Reporting Initiative. The collaborative processes of stakeholder engagement are therefore observed by considering the skills involved in the collaborative relationship processes of stakeholder engagement or those of adaptation, learning, absorption and integration of the resources that generate the co-creation of value.

**Design, methodology and approach** - The analysis is based on collecting corporate reporting documents and investigating the content of the narration of the stakeholder engagement processes. The paper maps the stakeholder engagement practices adopted by dividing them into practices of: • exchange of information; • consultation; • involvement; • cooperation. It then focuses on collaborative practices - the constitutive practices of co-creation of value - and analyzes the way in which collaborative co-creation takes place.

**Findings** - The research question is to verify whether, and possibly how, stakeholder engagement practices generate collaborative logic and constitute value co-creation paths and how the collaborative advantage can be concretely pursued. Stakeholder engagement, that is the set of practices the organization undertakes to involve stakeholders in a positive manner in organizational activities (Greenwood 2007), represents one of the central elements of the relationship process between the company and the stakeholders. This process basically implies a bi-directional path in which not only the company takes action to influence the behavior of the stakeholder, but the relationship is reciprocal and collaborative (Mairardes, Alves and Raposo 2012, David and Lane 2014). The guidelines of the Global Reporting Initiative (GRI Standards) establish that the first reporting principle is the inclusiveness of stakeholders. Companies that adhere to the GRI standards, by publishing their own report, respect this principle by adopting systematic approaches to stakeholder engagement. The stakeholder engagement activities are reported in the reporting document drawn up according to the GRI standards through a narration of the experience and effects obtained.

**Originality Value** - This paper links concrete practices of stakeholder engagement with the analysis of value co-creation in collaborative processes. It is a topic to be explored because can provide insights and study areas for the Value co-creation.

# The role of resource asymmetry in coordinating value processes

*Dehling Sebastian*

**Purpose** - Specialized heterogeneous actors participating in value formation processes generally benefit from the division of labor. However, the lack of theorizing on asymmetries among actors such as misaligned institutions imposes theoretical limitations on explaining value formation since the conditions of coordinating value processes remain mainly intransparent. This paper addresses the role of asymmetries in coordinating value processes, developing a conceptual framework on the conditions that affect resource integration as the coordinative embedded process of value formation.

**Method** - The paper develops a conceptual contribution in the form of a theoretical framework and initial typology by drawing on a carefully selected set of concepts as method theory that can inform the substantive value formation domain from a service marketing perspective. Building on the S-D logic axioms and service ecosystem premises and complementing them with selected external concepts, the paper presents asymmetry categories between actors that affect coordinating value processes and value formation. We present our findings visually in a conceptual framework, as associated narrative illustrations and a tentative typology of relevant asymmetries.

**Findings** - We find that asymmetries among actors in individual preferences, collective practices, and power relations are all grounded in resource asymmetry affecting actors resource integration processes and thus coordinative action and affecting each other, shaping the requirements for coordination.

**Implications** - The conceptual framework extends the understanding of the conditions for coordinating value processes and highlights actors' relevance as versatile coordinators. Likewise, it presents a starting point for empirical investigations of how coordinating value processes works and what it requires.

**Value** - This paper proposes a conceptual framework to explain resource integration conditions in service ecosystems and actors' challenges and opportunities in value formation processes characterized by resource asymmetry. The paper uses three sets of concepts to problematize resource asymmetry: (i) preferences, (ii) power, and (iii) practices. Ultimately, it provides suggestions for future research on service ecosystems and value formation.

**Keywords** - Service ecosystem, resource asymmetry, resource integration, value formation, actors, preferences, power, practices

# Blockchain technology and Service Ecosystem: a focus on Agri-food business

Del Vacchio Erica, Russo Spena Tiziana, Mele Cristina

**Purpose** - New technologies are predicted to disrupt service ecosystems (Leyer et al., 2018; Mele et al., 2019). Among different technologies, blockchain has entered the mainstream business and academic debates due to its potentiality and promising breakthroughs such as enabling actors to set up more agile networks, faster innovations, and closer relationships (Morkunas, et al., 2017; Jansen et al., 2020).

However, how blockchain impacts existing service ecosystems is not addressed yet (Kjellberg et al., 2015). A brief review of the S-D literature on the role of technologies and service ecosystems shows that: S-D logic characterizes the service ecosystem structure as layered and nested including multiple actors connected by shared institutional arrangements to co-create value (Lusch and Vargo, 2014). It acknowledges the role of Technology as an operant resource, capable of acting on other resources to create new value (Akaka & Vargo, 2014). Understanding the service ecosystems and their dynamic is an ongoing endeavor for S-D logic scholars (Lusch & Vargo, 2014; Vargo & Lusch, 2011). From the S-D logic perspective, new technologies become a tool to improve resources integration and engage multiple actors for value co-creation in the service ecosystem (Sklyar et al., 2019). To date, there seems to be no study on the role of blockchain in the value co-creation process and ecosystems dynamics.

**Method:** This work adopts a case theory method (Gummesson, 2017) to understand how blockchain technology affects actors' activities, relations and institutions, and the more extensive service ecosystem. The focus is on the agri-food business, seen as complex ecosystems consisting of different actors relationships and rules of games (Mutonyi et al., 2018). Our study addresses focus on BT features and how they to act as mechanism enabling actor's coordination's to create benefits for the ecosystems

**Findings:** Our study will show that the applications of blockchain technology allow value co-creation by impacting many of the established activities, relationships, and institutions. The value co-creation is prompted by new interactions based on decentralized decision-making processes, transparency, and immutability. New processes emerge, actors relationships are prompted by trust, safety, information sharing and collaborations and new language and rules are established.

**Originality/value** – The applications of blockchain technologies have been heavily promoted, but there has been very little research into the integration of Blockchain in the analysis of service ecosystems. This study will be original in its foundation to analyze the role of technology as multilayered resources impacting actors, processes and institutions to enable the value co-creation process in the service ecosystem.

**Key words** – Blockchain technologies, service ecosystem, actors' integration, value co-creation, resource integrations,

**Paper type** –Research paper

## Higher education (HE) service pollution: attempting against its sustainability

*Díaz-Mendez Montserrat, Zamora-Ramos Moisés, Quero-Gervilla María J., Chamorro-Mera Antonio*

**Purpose** - The rapidly changing and increasingly competitive environment of higher education (HE) service, has attracted the attention of several scholars in the search for best management practices. As higher education institutions (HEIs) seek to increase their market share and positioning, they have opted to apply marketing concepts to generate more effective student recruitment, retention and graduation strategies (Seeman and O'Hara, 2006; Koris and Nokelainen, 2015; Dollinger, Lodge and Coates, 2018). However, worldwide, a trend has been generated among HEIs towards the "Marketization of higher education" same that has led to "pollution in the (HE) service ecosystem" causing alterations in its healthy functioning and in the achievement of its academic objectives (Molesworth, Scullion and Nixon, 2010; Judson and Taylor, 2014; Díaz-Méndez, Saren and Gummesson, 2017).

In this paper we focus on a specific item of HE service pollution: faculty performance evaluation surveys (FPES). It is essential to understand the implications of this traditional evaluation practice and its impact on the functioning of the service ecosystem, due to the consequences that it has over HE long term objectives. In particular, we intend to frame the study of the current FPES as a contaminant of the HE service, under the SD logic theory (Vargo and Lusch, 2017; Díaz-Méndez, Paredes and Saren, 2019) in order to bring new perspectives to HEIs, facilitating the improvement in the management of this complex service, without compromise its sustainability.

**Design/methodology/approach** - This study comprises an in-depth literature review and critical analysis complemented with a quantitative research through surveys. Data are collected from a homogenous university students' group from a specific area of Mexico to evaluate the impact that current FPES have on long-term academic objectives, pointing out this HE service ecosystem pollution and the risk over its sustainability. The study is conducted under the SD logic approach and the service ecosystem perspective.

**Findings** - HE service has been suffering marketization by focusing its management on the "student-customer" metaphor indiscriminately. The literature review shows that the current strategies for recruitment, retention and graduation, pursue mainly the "student satisfaction as customer", but leave aside the service complexity and long-term academic objectives, endangering HE sustainability. We present a critical analysis to the traditional FPES evaluation practice, since their results are based on the students' perception, assuming the professor as responsible for transmitting value (value delivery) and not under the value co-creation framework. We argue that the concept of SD-logic and the service ecosystem perspective, are suitable for the study of HE service ecosystem pollutants, an approach that has been little studied and argued so far.

**Practical implications** - This paper identifies FPES as a specific pollutant in the service ecosystem, hence, we alert HEIs to the pollution generated by this current practice in the fulfillment of the long-term objectives of HE as a pillar of human development. Universities are alerted not to assume themselves as a company exclusively focused on "customer satisfaction". With the above, HEIs may improve their strategies for attracting, retaining and graduating students under the perspective of the SD-logic and service ecosystem perspective to guarantee their permanence.

**Originality/value** - Hitherto not enough research has been developed to point out the risk of FPES as a contaminant of HE service, under the SD-logic theory and service ecosystems perspective, considering therefore, the co-creation of value and the active student participation in the fulfillment of the academic objectives. The contribution is framed on the FP9/Axiom 3 and FP10/axiom 4 of service-dominant logic, that highlights HEI services as holistic experiences that have to zoom out from dyadic interactions to adopt the ecosystem perspective (Vargo and Lusch, 2017).

**Keyword** - Higher education marketization, service ecosystem pollution, faculty performance evaluation surveys, Service Dominant Logic.

**Paper type** - Research paper

# **Servitization challenges in transforming service ecosystems: An empirical analysis of firms' responses and a conceptual framework**

*Edvardsson Bo, Tronvoll Bård*

**Purpose** - Digitalization is revolutionizing manufacturing firms, as it becomes a driving force to innovate, compete and transform service ecosystems. Therefore, manufacturing firms face challenges and opportunities in developing their service business. This paper aims to (a) empirically identify critical servitization challenges and (b) develop a conceptual framework explaining how digitalization enables servitization responses in transforming service ecosystems.

**Method** - The empirical basis is data from personal, in-depth interviews with 20 leaders and experts representing five B2B firms in the transportation industry. Data is analyzed using open coding, constant comparative analysis resulting in First and Second-order themes, focusing on firm responses to their servitization challenges.

**Findings** - The empirical findings are presented in the form of a transformation journey map. This map summarizes empirically grounded themes on how firms respond to and try to benefit from digital-enabled service ecosystem transformation. Building on service ecosystem transformation research and the transformation journey map, a conceptual framework focusing on firms' servitization responses is developed.

**Implications** - This empirical study and suggested conceptual framework on servitization in transforming service ecosystems extends the understanding of firms' responses to servitization challenges. Furthermore, this paper discusses how to institutionalize new ways of co-creating value that unleash engaged actors' access to and integration of resources to develop new servitization practices.

**Value** - This paper proposes an empirically grounded conceptual framework to explain firms' responses to internal and external servitization challenges and opportunities in transforming service ecosystems. Three sets of concepts are used: (i) Mindset tensions and aligning, (ii) resource matching and integration, and (iii) value proposition development and value capturing. Suggestions for future research on digital enabled servitization in transforming service ecosystems are provided.

**Keywords** - Service ecosystem transformation, servitization, challenges, digitalization, resource integration, mindset, value proposition, value capture

## **Understanding the ‘resourceness’ of wildlife as a commodity – An institutional, service ecosystem perspective of the exotic pet trade**

*Feddema Kim, Harrigan Paul, Koskela-Huotari Kaisa*

**Purpose** - The continued overharvesting of wild species for the global wildlife trade remains a key cause of global extinction rates, biodiversity loss and social inequity (Esmail et al. 2019). Wildlife trade has also been linked with emerging infectious diseases and the risk of future pandemics (Morcatty et al., 2021). It is therefore of major concern to limit the scale of wildlife trade by reducing demand and discouraging trade behaviours. To do this, it is critical to understand the value of wildlife as a commodity. While recent developments in S-D logic shed light on the institutional nature of the ‘resourceness’ of resources (Koskela-Huotari and Vargo, 2016) and the complexity of ‘value-in-cultural-context’ (Akaka et al., 2013), these insights have yet to be connected with the literature aiming to reduce demand for wildlife products. The purpose of this paper is therefore to use S-D Logic’s institutional, service ecosystem perspective to better understand the attribution of ‘resourceness’ to wildlife in online exotic pet communities.

**Methodology** - We collected data from 9 exotic pet ownership Facebook groups based in the United States (US), the United Kingdom (UK) and Indonesia. All posts uploaded between June -November 2020 were downloaded with their associated comments. For each group, the 30 posts with the most comments were selected for further analysis, giving a final dataset of 270 posts and 15, 855 comments. Critical discourse analysis was conducted using NVivo 12 to examine three dimensions of institutional arrangements – symbols, practices and organising principles - and how these shape the ‘resourceness’ of wildlife as a commodity.

**Findings** - We found key differences between the three cultures in their approach to resourceness of wildlife, the motivations for pet ownership, and the integration of other resources with the animals. Community structure and normalizing practices differed between the three countries. Whereas in the UK and US ownership groups were more likely to be at the national level, Indonesian groups were specific to individual cities and therefore held many more in-person events. Differences in both integrative and representational practices were evident across cultures in their discussions of husbandry and human-animal relationships, such as whether animals are perceived as symbolic family members, pets or objects. Overall, we identified six unique views of ‘resourceness’, representing mammals and reptiles for each group.

**Originality/value** - By synthesising S-D logic with wildlife trade research, and identifying ‘resourceness’ in this novel context, we significantly add to the understanding of the value that exotic pet ownership creates for people and how their perception of wildlife resourceness is shaped by their socio-cultural context. Building on this understanding, we propose that tailoring conservation efforts to reflect these unique community perceptions of exotic wildlife ownership is more likely to result in effective behaviour change strategies and, therefore, positive outcomes for wildlife. Thus, for each of the six ‘resources’ identified, we provide practical guidelines for creating demand reduction campaigns, education programs for animal welfare and policy frameworks.

## **Decentralized autonomous organizations (DAOs) for value cocreation in the arts**

*Fehrer Julia, Mullen Molly, Morreale Fabio, Lythberg Billie, Newth Jamie, Wieland Heiko*

**Purpose** – Digital business models, such as those employed by Spotify, Houzz and Artstation, have significantly changed the way value is created in the arts sector. This change, however, is not always in favour of the artists and their audiences [1,2,3]. Artistic work has, arguably, long been underpaid and undervalued [4]. Only one quarter of creative professionals report that they can live comfortably on their income, while the others feel they are unfairly remunerated [5]. Tensions around income and funding in the arts sector provide fertile ground for disruptive decentralized and blockchain-based business models [6] – referred to as decentralized autonomous organizations (DAOs) [7]. For example, Audius – a blockchain-based music streaming service – automatically pays royalties to artists when their songs are downloaded, with no middle men (e.g., central platforms, music labels) involved. Decision rights are distributed among developers, token holders and users leading to new ways of value co-creation [8, 9] based on democratic and more equitable governance mechanisms [10, 11]. DAOs have the potential to recalibrate the arts sectors' business models by facilitating fair and equitable ways of sharing art [12,13,14]. For example, they provide the means to design 'fair trade' models for art distribution and art funding. The purpose of this research is to explore the potential and challenges of DAOs in the arts. Specifically, we aim to answer the following questions: (1) To what extent do decentralised technologies offer artists more inclusive and participative solutions to organising and resourcing their work? And, (2) How can DAOs be structured and governed to allow for sustained value cocreation among artists and between artist, their funders and their audiences?

**Design/Methodology/approach** – We currently explore the business challenges (particularly related to digitalization), tensions and needs of artist in New Zealand using focus group discussions, in-depth interviews and observations [15]. Additionally, we analyse multiple cases of existing DAOs in the arts sector [16] and interview founders, developers, token holders and users to understand how DAOs operate. Initial findings can be presented at the 7<sup>th</sup> Naples Forum on Service in June 2021.

**Findings** – We expect to discover alternative ways of cocreating value in the arts, specifically related to funding and sharing art. More generally, this research will contribute to understanding blockchain-based decentralized business models and their underlying logic of value cocreation.

**Originality/value** – As evidenced by the literature, there is a widespread belief that disruptive technologies, such as blockchain and distributed computing systems have fundamental implications for how value is created through appropriate business models [17]. While the business model literature has focused primarily on centrally governed organizations [18,19], and more recently on platform-based [20] and social purpose organizations [21], decentralized organizations emerging in the context of distributed computing systems are less understood. This research equips scholars, managers and policy makers with new theory for business model design of DAOs and their systemic value cocreation mechanisms, applicable for the arts sector and other areas of the economy, such as the growing gig, freelance and sharing economy, in with many contributors feel undervalued and unfairly remunerated.

**Keywords (max 5)** – Systemic business models, blockchain, DAOs, value co-creation

**Paper type** – Explorative qualitative

## **Leading with Context: Impacts from IAD Framework, Service Science and Service-Dominant Logic**

*Frosch Markus, Warg Markus*

**Purpose** - This paper demonstrates that Leadership - and Human Resource Management literature is moving towards a Service Science perspective in which value creation unfolds out of action situations embedded in polycentric systems interconnected by value propositions (Boxall & Purcell, 2016; Hartmann, Wieland, & Vargo, 2018; Ostrom, 1990). To contribute to this grounding, the authors draw on the perspectives of IAD-framework, Service Science and Service-Dominant Logic to provide further theoretical foundation for leadership (Kiser & Ostrom, 1982; J. Spohrer, Maglio, Bailey, & Gruhl, 2007; Stephen L. Vargo & Lusch, 2004). The purpose of this conceptual paper is to derive implications for the foundation, design and output of leadership by theory synthesis.

**Design/methodology/approach** - A conceptual paper as methodology and within this methodology “theory synthesis” as research design are chosen (Gilson & Goldberg, 2015). “Theory synthesis” is understood as the conceptual integration across multiple theoretical perspectives. After outlining and summarizing the conceptual domain theory of HR Management and Leadership the phenomenon of Leadership is analyzed through new perspectives to increase the understanding and to extend the existing conceptual boundaries (Jaakkola, 2020; MacInnis, 2011). In order to achieve conceptual integration, new perspectives of Elinor Ostrom’s Institutional Analysis and Development (IAD) framework (Ostrom, 2009; Ostrom, Gardner, Walker, Walker, & Walker, 1994), Service Science (J. C. Spohrer et al., 2019) and Service-Dominant Logic (Stephen L Vargo & Lusch, 2018) are elaborated and integrated.

**Findings** - The synthesis of the new perspectives and their conceptual transfer to the domain theory is appropriate to expand the theoretical foundation of leadership. Derived from IAD framework, employers and employees find themselves as actors in various situations in action arenas. These situations are embedded in polycentric systems, depending on rules and linked to possible outcomes. The synthesis with the perspectives of Service Science and the Service-Dominant Logic also allows for an in-depth analysis and extended understanding of the relationships between the systems interconnected by value propositions and mutually value creation, as well as the pattern and processes of co-creation. The main findings of the conceptual paper are, firstly, that leadership is not an action situation in a closed action arena limited to the organisation but is strongly influenced by the context in which it is embedded and, secondly, that current leadership approaches need to be further developed in the direction of leadership with context.

**Originality/Value** - The paper has an impact on practice and research. For practice this is especially for the understanding and design of new leadership and workforce approaches based on context instead of control. For research it is expected to yield further insights into the foundation and design of HR Management, especially from the field of actor arenas embedded in polycentric systems interconnected by value propositions and service exchange.

**Keywords** - HR Leadership, HR Management, action situation, service systems, value proposition, service exchange, IAD framework

**Paper Type** - Conceptual paper (theory synthesis)



# **Humans and machines in the emergence of service ecosystems: Addressing false dichotomy by embracing paradox**

*Fujikawa Yoshinori, Sishiyama Kohei, Oue Shingo, Suzuki Satoko*

**Purpose** – To theorize the roles and interactions of humans and nonhumans (machines) in the emergence of service ecosystems (Barile et al., 2019; Storbacka et al., 2016; Vargo et al., 2021; Yadav & Pavlou, 2020). To this end, we: (1) identify and address conceptual confusions (e.g., humans vs. nonhumans as false dichotomy; machines as actors vs. resources) by integrating service research discussion on emergence with insights from computer/information/management sciences (Rahwan et al., 2019; Raisch & Krakowski, 2021); and (2) model and simulate the humans/nonhumans-involving emergence with the agent-based modeling (ABM) (Rand & Rust, 2011; Rand et al., 2018).

**Design/Methodology/approach** – Taking the conceptual-only paper steps (Vargo & Koskela-Huotari, 2020), we aim at achieving theoretical contribution of “envisioning (revising)” and “relating (integrating)” (MacInnis, 2011). We employ ABM for simulation-based illustrations.

**Findings** – The recent effort to conceptualize emergence (Taillard et al., 2016; Vargo et al., 2021), in the context of rapid technological advancement (Bryoffsson & McAfee 2014; Ng & Wakenshaw, 2017), calls service researchers for theorizing the roles of not just humans but also machines in service ecosystems, and it invites conceptual confusions: For instance, Storbacka et al (2016) describes machines/technologies as actors, whereas Akaka & Vargo (2013) regards technologies as operant resources.

Employing the automation-augmentation paradox, we address the false dichotomy of “humans vs. nonhumans”: Instead of taking automation (machines taking over a human task) vs. augmentation (machines helping humans to perform a task) as tension, Raisch & Krakowski (2021) proposes a paradox view of the two interdependently reinforcing each other across time and space. This helps us to integrate machines as both actors (when replacing humans through automation) and resources (when helping humans through augmentation).

In simulating human-human, human-machine, and machine-machine interactions in the emergence, we incorporate ideas like “nesting” and “reinforced learning” into ABM (Manson, 2005; Rounsevell et al., 2012) and compare it with alternatives (e.g., generative adversarial nets) (Goodfellow et al., 2014).

**Research limitations/implications** – As a conceptual-only paper with simulation-based illustration, it lacks empirical support.

**Practical implications** – We intend to help focal actors (Storbacka et al., 2016) or those designing and managing a service ecosystem to effectively manage nonhuman elements of emergence.

**Originality/value** – Humans are no longer sole agents in our society, yet most service research to date assumes human agency. The paper helps advance theoretical development by addressing this gap in the service literature.

**Key words** (max 5) - emergence, service ecosystems, actors, resources, human-machine interactions

**Paper type** – Conceptual paper

## **Social robots in the cultural heritage experience**

*Gargiulo Roberta, Carignani Francesco, Bifulco Francesco*

**Purpose** – A recent stream of research is about the interaction between AI technologies and users and the robot acceptance/rejection (e.g. Mele et al., 2020). Relational services, with a strong human interaction, should benefit little from AI replacement (Huang and Rust, 2018) even if they could provide customized services to individuals (Wirtz et al., 2018) and could potentially make them feel they are in the company of another social entity, what van Doorn et al., (2017) called ASP - automated social presence. Anyway, the debate is still open and we wanted to analyse audience attitude towards robots in the cultural heritage context (Del Vacchio et al., 2020).

**Design/Methodology** – We conducted a single exploratory case study (Yin, 2014; Gummesson, 2017) and we chose evidences from cultural heritage context, in particular we analysed the MAV (Virtual Archaeological Museum) which, at the end of 2019, introduced Pepper as robot guide that welcomes visitors and guides them to visit. We made a survey on a sample of about 100 subjects including families, young students and tourists.

**Findings** – The 69.1% consider the range of services offered by Pepper excellent. The 93.8% believe that Pepper can improve customer satisfaction. The 76.5% think that Pepper greets the audience as a real human being, the 22.2% in a neutral way and the 1.3% consider Pepper's greeting are rude. The 39.5% of users believe that human-robot interaction can never replace that between human beings, the 43.2% believe that robots will replace humans and the 17.3% that human-robot interaction won't change the current reality.

**Research limitations/implications** – Most users place utmost confidence in the advantages offered by AI to museums: Pepper is considered a great satisfaction tool and it's not perceived as an artificial machine as respondents compare the robot to a real human being, with polite and kind ways. This research underlines that robots' acceptance is growing very rapidly also for relational services but further investigations in other field of research are needed, analyzing other typologies of AI perhaps with a larger sample.

**Originality/value** – This work offers a better understanding of the impact that social robots may have on consumers in the cultural heritage context: through the direct observation of audience interacting with Pepper in the museum and thanks to the survey results, it has been possible to understand consumers' attitude towards robots which can be useful to improve experience and satisfaction.

**Keywords** – Human machine, service interaction, cultural heritage, social robots, bot

**Paper type** – Research paper

## **‘Silver Starters’: startupper over 50s.**

*Greco Fabio; Di Bernardo Irene*

**Purpose** - When practitioners deal with the theme of start-ups, innovation, and the birth of new ventures, they associate it very often with the initiatives of young people. (Forbes, 2020).

However, even though data point out that this is the predominant scenario, reality has proven different. This has already emerged from the ISTAT Italia Startup 2018 Report: in Italy, 15% of startupper are under 30 while 2 out of 3 startupper (66%) are aged between 30 and 49 and almost 20% of "new generation entrepreneurs" are actually over 50 (ISTAT, 2018).

Even in the international scenario, the trend is quite similar.

Many studies have focused on innovative solutions to production, distribution and consumption of goods and services aimed at utilizing the purchasing potential of older people (Djellal and Gallouj, 2006; Mostaghel, 2016; Yang *et al.*, 2016) investigating organizations that provide services ‘for’ the silver economy’ but there is not enough literature evidence of start-ups borned ‘by’ the silver economy.

A step forward was made with the studies of silver entrepreneurship (Cannon, 2008; Aversa and Ladevaia, 2019, Peric, 2020) observing therefore silver entrepreneurs are over 50’s who utilise their experience to create a business in later life.

However, no scientific study has focused on the phenomenon of over 50s who challenge themselves at creating new innovative businesses and therefore start-up companies.

Many people over 50 consider the creation of a start-up, despite the focus being on young entrepreneurs. Many programs are designed only for young people. Conversely, we have chosen the case study of the 'Silver Starters' European program which aims to support entrepreneurs over 50 to start and manage their business.

**Design/Methodology/Approach** - The study adopts a qualitative approach with case study methodology (Yin, 2012). It analyzes the case of the EIT Health Silver Starters 2020 program. The program, organized by four different European Universities, included a free online training course helded between September and December 2020.

**Findings** - The preliminary findings offer the opportunity to explore that mature workers are finding the advantage of starting new careers as entrepreneurs. As Europeans live longer, they spend more years working than ever and many people find themselves making a late career transition to entrepreneurship.

**Research limitations/implications (if applicable)** - This study has theoretical implications as it contributes to the growing start-ups, silver economy and silver entrepreneurship literature.

**Practical implications (if applicable)** - From a practical point of view, this research furthers the understanding of the possible positive local economic impact of entrepreneurs over 50s who found a start-up. We also identify that entrepreneurial training programs allow the proliferations of new business ventures in the start-up ecosystem.

**Originality/value** - Until date, no studies investigated entrepreneurs over 50s founding a start-up company and even less investigated its underlying inspirations. Finally, through empirical research, we capture a new dimension of start-ups' phenomenon and the advantages and challenges still open.

**Keywords (max 5)** - start-ups; silver entrepreneurship; silver economy

**Paper type** - Research paper

# Ambiguous Loss and Value Co-Destruction in Fragmented Service Systems

Gummerus Johanna, O'Loughlin Deirdre, Kelleher Carol

**Purpose** - In response to increased calls for research on family/carer roles, experiences, emotions and contributions in family systems (Cox and Paley 2013, Danaher and Gallan, 2016; Sharma and Conduit, 2016), this study explores the nature of ambiguous loss (Boss, 1999, 2016) experienced in families with Autism Spectrum Disorder (ASD) and Down syndrome. Ambiguous loss is defined as a situation of unclear loss that remains unverified and thus without resolution, where the outcome is unpredictable, and where the stressors are unclear or ambiguous (Boss, 1999; 2007). Extending beyond the carer-child dyad, we investigate parents' experiences of how ambiguous loss and service system fragmentation in these contexts affects not just individual members, but both value co-creation in and the self-adaptability of family and service systems.

**Study design/methodology/approach** - Adopting a participatory action research (PAR) approach, our qualitative study of 12 participants from families with ASD and Down Syndrome revealed several key themes which illuminate the nature of ambiguous loss and fragmentation in service systems.

**Findings** - Specifically, we identify *context ambiguity* related to the condition, *identity ambiguity* linked to shifting roles in and beyond the family and *temporal ambiguity* and its relationship to future expectations of formal healthcare providers. We find that ambiguous loss is acutely experienced where the boundaries between the family and service systems are blurred or fragmented. This leads to ongoing value co-destruction in service systems.

**Originality/value** - While service scholars have focussed on the optimal function of service systems and how value is co-created, we expose the fragmentation in both formal and informal healthcare systems. We also discuss the implications of service system fragmentation on value co-creation between multiple actors in service systems. In terms of managerial implications, we call for failures in service systems, in particular in the contexts of health and social care, to be addressed in order to appropriately support families who require these services most acutely.

# **The Interplay of Market Ontologies and Sustainable Development Goals**

*Helkkula Anu, Arnould Eric*

**Background** - United Nations sustainable development goals (SDGs) call for worldwide action to promote prosperity and end poverty for every country and person while protecting the planet. Current ontologies behind the SDGs are sociocentric; they identify the planet (animals and nature) as an object, not as a subject.

**Purpose of the study** - To extend the axioms of S-D logic to include nature. The axioms of S-D logic potentially could, but current wording does not, include nature as an actor / beneficiary in value cocreation and resource integration. We adopt the neo-animistic approach to examine value cocreation by multiple actors in resource integration. Actor in neo-animism understands all living beings as actors in necessary communication with one another and resource interdependent upon one another.

**Method** - Using conceptual methods to examine how the axioms of S-D logic can support SDG goals, we use the theory of constraints: a chain is no stronger than its weakest link.

**Findings** - This study claims that the nature is the weakest link in framing the SDGs full potential for resource integration and value cocreation.

**Contribution** - The study proposes a Neo-Animistic S-D logic model to support design of co-creating eco-ecological prosperity.

# Conceptualizing dynamic and phenomenological value co-creation in event management

*Hogg Johannes, Werner Kim, Griesse Kai Michael*

**Purpose** – Failure in value co-creation has received little attention in the event literature. This appears surprising given that the interactions among actors at an event may also reduce the experienced value for other participants and that of the entire event or the event's service ecosystem. This conceptual paper aims to integrate value co-destruction into the resource integration process.

**Design/Methodology/approach** – Journals of the “Scimago Journal & Country Rank” were systematically reviewed for the keywords “value co-destruction”, “value destruction” and “negative value co-creation”. The 102 articles identified were qualitatively analyzed using Mayring's model of category development. Two overarching categories are build: conceptualisation of value co-destruction and reasons for value co-destruction.

**Findings** – In literature, value co-destruction is both, process and outcome in which the viability or well-being of an actor or system decreases. The article offers the concept of a five-phases resource integration process. Reasons that leads to failure in the phases of the resource integration process are categorized.

**Research limitations/implications** – The need to enhance the understanding of the complexity of the event management process with its (many) interdependencies and dependencies. Events are always live and, thus, subject to unforeseen circumstances. Depending on the reaction of the event facilitator, a disruption can be solved to a satisfying or non-satisfying level for the other conference participants. The disruption itself, however, cannot be made irreversible and becomes part of the event. Four dynamic scenarios are prototyped linking resource integration failure, value co-destruction, service recovery process.

**Practical implications (if applicable)** – Event managers should be aware that value co-destruction might happen due to issues under the control of the event manager. However, value co-destruction might also happen due to issues beyond the control of the event manager. Complex situations in an event require a more experimental mode of management that includes the acceptance of potential failure. Positive implications for event managers include: the knowledge of co-destruction processes can significantly contribute to a successful event; a certain level of flexibility can assist in dealing with unforeseen incidents so that the overall outcome can still be successful and valuable for different stakeholders; and even if the overall outcome is negative, a service recovery process might lead to new and enhanced benefits.

**Originality/value** – The paper's approach focuses on the process and less on the outcome. Value co-destruction is considered as a diametric analogy to the very same value co-creation process.

**Key words** – Event Management, Service-Dominant Logic, Value Co-Destruction, Value Formation, Negative Value Co-Creation,

**Paper type** – Conceptual paper

## **The Changing Role of Service Relationships: Value-in-use across borders**

*Holmqvist Jonas, Minina Alisa*

**Purpose** - The world has become increasingly global in the last decades, and this development is likely to continue even though the current Covid-19 crisis temporarily has reduced mobility. Building on this situation, we study the value-in-use of local versus transnational service relationships for expatriate consumers. While most day-to-day services will take place with local service providers, many expatriates maintain more lasting relationships with service providers in their country of origin. This is especially true for more significant relationships, such as banking. Building on this situation, we study the different forms of value-in-use in long-distance service relationships to understand the value-in-context that explains why consumers keep transnational these service relationships rather than opting for more local relationships.

**Design/Methodology/approach** - We conducted 31 in-depth interviews (McCracken 1988) with globally mobile professionals, all of whom currently worked and lived in a different country to their country of birth. For increased representability, respondents came from 24 different countries and were between 24 and 60 years of age. Interviews lasted 40–90 minutes and were transcribed, generating 388 pages of text. Transcripts were analytically coded (Lofland et al., 2006) and we further conducted analytical reduction of the data across interviews (Holt, 2002; Figueiredo, 2012), looking for emerging patterns related to value-in-use in interactions.

**Findings** - Our interviews allow us to identify four different types of service relationships. In decreasing order of perceived value-in-use, these relationship types are: long-term partnerships, convenience arrangements, local contacts, and hook-ups. Extending value-in-context, we further find that customer motivations include practical aspects (for example, not speaking the language of the host country; not planning to stay long) as well as emotional aspects (for example, a strong trust in a particular service employee; wanting to keep a trace of their identity from the former country).

**Managerial implications** - The findings help managers identify the key value-in-use that customers perceive in different forms of service relationships. Managers can use this information both to strengthen existing service relationships as well as improving the value propositions for future customers.

**Originality** - We contribute to the existing literature by identifying how globally mobile consumers navigate their economic reality by simultaneously managing relationships with multiple service providers. We further extend this contribution by uncovering how the perceived value-in-context results in markedly different forms of service relationships, and identify how these relationships develop over time.

**Key words** - value-in-use; mobility; value; service relationships

**Paper type** - Research paper

# Expanding Value Co-Creation: Value-in-Context in Confucian Cultures

*Holmqvist Jonas, Royer Jade*

**Purpose** - The service literature increasingly recognizes the importance of value-in-context (Chandler & Vargo 2011) and further extends this concept to value-in-cultural-context (Akaka, Schau & Vargo 2013), emphasising the need to understand the cultural context in which value co-creation takes place. Building on this literature, we approach value co-creation through the lens of Confucian culture in its South-East Asian cultural context.

**Design/Methodology/approach** - We employ a mixed method to capture the interplay between different antecedents of value-in-cultural-context. Our first study consists of in-depth interviews with 21 South-East Asian consumers. We rely on an open-ended interview approach guided by respondents' experiences and stories about how their cultural contexts shape their value-in-use. Our second study extends the findings to verify the impact of the cultural context on value-in-use. We employed a scenario-based 2x2 survey in which 160 respondents were assigned to four different scenarios measuring their intent to engage in value co-creation based both on the level of the service experience (attentive versus arrogant) and the need to save face (collective versus individual service).

**Findings** - Our results present two main findings. First, we identify four cultural norms playing a particularly important role for understanding value-in-context for South-East Asian consumers in their service experience: the role of the family; the importance of honour and respect in public; collectivism; and grace. Second, we show how value co-creation is shaped by Confucian culture to such an extent that perceived value-in-use looks counterintuitive to the current literature, confirming the need for understanding value-in-cultural-context.

**Managerial implications** - South-East Asia represents a rapidly growing market yet many companies establishing themselves in South-East Asia have failed due to not understanding the cultural context (Johanson & Vahlne 2009). Our findings help managers by identifying key cultural antecedents of value perceptions in South-Asia and further showing how they impact consumers.

**Originality** - We respond to calls for research into value-in-cultural context (Akaka et al. 2013) to identify how value co-creation is shaped by key Confucian cultural norms in South-East Asia. We further add to the literature first by identifying the cultural norms having a marked impact on value-in-cultural-context, next by detailing how these cultural norms result in value perceptions looking markedly different in South-East Asian cultures, and finally by testing the strength and impact of these cultural norms on consumers' willingness to engage in value co-creation.

**Key words** - co-creation; culture; value; South-East Asia

**Paper type** - Research paper



## **Building legitimacy in the early stages of emergence and institutionalization of service ecosystems**

*Kaartemo Valtteri, Davidian Ken, Eerme Tõnis*

**Purpose** – Recently, marketing scholars have become interested in understanding what markets are, and how they emerge over time. Here, S-D logic has been perceived as a useful lens to understand markets as institutionalized solutions. While we have some empirical studies on the emergence of service ecosystems, for example under the research stream of market shaping, there is still limited understanding of how various events build legitimacy in the early stages of emergence and institutionalization of service ecosystems. As a result, theory development is still in its infancy and more research is needed. This paper investigates the legitimacy building in the context of suborbital space tourism ecosystem.

**Methodology** – This is a longitudinal case study of the on-going emergence of the suborbital space tourism ecosystem. The study builds on a historic event analysis spanning 70 years with a closer look at 8,400 pieces of secondary and archival data. Further, we conducted 40 interviews of market actors to gain a deeper understanding of the industry emergence process.

**Findings** – We describe how legitimacy has been built in the suborbital space tourism ecosystem over the past 70 years. We explicate the role of approximately 600 events in the early stages of the emergence of a market. The results indicate that market work of various actors can build legitimacy in service ecosystems.

**Research limitations** – The study is based on a single ecosystem, and focuses on legitimacy building before any market actor has been successful in generating revenue.

**Practical implications** – The study provides insight on how market actors can build legitimacy in nascent and emerging service ecosystems. The study reveals how different events lead to the increased sociopolitical and cognitive legitimacy at the early stages of market institutionalization.

**Originality/value** – This paper contributes to the literature on emergence and institutionalization in service ecosystems by discussing how various events contribute to legitimacy building. Particularly, we reveal mechanisms of legitimacy building and concentrate on the early stages of emergence and institutionalization. We extend the prior findings in megamarketing, market shaping and S-D logic literature on the legitimacy building, emergence and institutionalization of both markets and service ecosystems.

**Key words** – emergence, legitimacy, service ecosystem, market shaping, market innovation, institutionalization, space, tourism

**Paper type** - Research paper

## Strategizing in service ecosystems: A Service-Dominant driven, value-based platform

*Katsifaraki Georgia*

This theoretical work is about the *development of a synthetical, value-based, strategic platform for modern market transactions under the S-D logic principles*. Motivated by the seminal work of Brandenburger and Stuart (1996) on the *Value-based Business Strategy*, I build on the tools of *cooperative game theory* to propose a model platform for studying value creation in respect to market interactions, imbued with the axioms and core values of S-D logic. The platform specifically adopts a network, institutionalized view of transactions - *a service ecosystem perspective* (Lusch et al. 2010; Chandler and Lusch 2015; Vargo and Lusch 2016), viewing transactions at a micro, as well as a macro (market) level. Existent literature on the analysis of the value creation process is currently dominated by “myopic” views that do not consider the macro-effects of the wider ecosystem on co-creation and vice-versa (e.g. Grönroos 2011; Grönroos and Voima 2013). Exception is the theoretical work of Chandler and Lusch (2015), who propose a conceptual alternative of the market as a broader, dynamic service ecosystem, and theoretically discuss the value-creation processes taking place within. Building upon their work and the wider S-D literature, I hereby propose a value-based platform that analyzes actors’ dynamics, considering the effect of the macro environment upon the value co-creation process (and vice-versa). The platform helps addressing a number of emerging questions, such as: (i) how actors offering concrete value propositions interact with actors bearing unique value dispositions within a service ecosystem, and (ii) how actors position themselves favorably, in order to attain strategic benefit in ecosystems. The proposed platform aims to be utilized as a strategist’s tool for holistic value-creation analysis taking place within service ecosystems. This work notably responds to the call of Vega-Vazquez et al. (2013) for “*a new reference framework for value creation, centered on the co-creation process*”, as well as the call of Vargo and Lusch (2017) for *the development of strategic conceptual platforms on the basis of the S-D narrative*, and specifically contributes to the literature in these two directions. Emphasis is further laid on the empirical implications of co-creation: using the value-based platform, four co-creation strategies are identified, with the intent to help managers form successful strategies that can lead to a significant strategic benefit. A thorough literature review, game theoretic cooperative and hybrid models, and a relevant case study are used for the development and demonstration of the proposed model platform and strategies.

**Keywords** - value co-creation, strategy, Service-Dominant logic, value propositions, cooperative game theory

## Identifying patterns in Big Data Analytics to enhance value co-creation

*Keller Barbara, Möhring Michael, Carrubbo Luca, Caputo Francesco, Schmidt Rainer*

**Purpose** – Recognizing the key role of Big Data Analytics in influencing business, the research aims to elaborate main phases and subsequently linked challenges through which companies can approach, develop, and manage Big Data Analytics. Hence, this research provides insights for increasing opportunities of collaboration and value co-creation in the emerging digital and hyperconnected economy.

**Design/Methodology/approach** – Following a case study approach (Bensabat et al.1987; Darke et al. 1998) leading enterprises in different sectors have been examined and a conceptual framework has been designed. The conceptual framework is then discussed by means of the SD-Logic to evaluate its validity and applicability. Thanks to the interpretative lens provided by the Service Dominant Logic insights how companies should ‘live’ for approaching to Big Data Analytics in a suitable and value generative way are provided.

**Findings** – After analyzing the collected data and materials as provided in the Grounded Theory Approach (Strauss & Corbin 1994; Glaser & Strauss 2017), the study provides a comprehensive framework with the three main phases and 16 associated patterns typically emerge and evolve at specific states in Big Data Analytics projects. Subsequently, main risks and opportunities are underlined in the light of value co-creation.

**Research implications/limitations** – The paper recalls the attention in defining clear patterns for digitization and technology-based projects. The proposed conceptual model derives from multiple case studies, its generalizability requires discussion and analysis despite its validity is discussed and questioned by SDL. In particular, a quantitative evaluation of the patterns and challenges is desirable to weight the importance of the aspects.

**Practical implications (if applicable)** – The framework offers practitioners awareness about the critical tasks at different phases of Big Data Analytics Projects. Thus, in advance the possibility is given for developing performance measurement tools able to cope with the challenges and evaluate in which ways each phase can contribute to the value co-creation processes.

**Originality/value** – The paper contributes to the ongoing debate about the potential benefits and risks in data-driven digitization projects. Providing a conceptual model researchers and practitioners are supported in understanding how Big Data Analytic can be planned and managed for enhancing value co-creation processes.

**Key words** (max 5) – Big Data; Big Data Consumer Analytics; data-driven digitization; Service Dominant Logic; Value co-creation.

**Paper type** – Research paper

## Collective Engagement towards Social Purpose

*Kleinaltenkamp Michael, Conduit Jodie, Plewa Carolin, Karpen Ingo O., Jaakkola Elina*

**Purpose** – Our societies recognize the need to be more socially oriented; whether it be through addressing climate change, obesity, the consequences of the COVID-19 crisis etc. Consequently, there is a need not only for ‘non-profit’ but also for ‘for-profit’ businesses to play a greater role in addressing social purpose, to ensure not only scalable and societal impact but also greater economic returns. However, achieving social impact requires more than independent engagement of each individual; it requires collective engagement, i.e. “multiple actors’ shared cognitive, emotional, and behavioral dispositions, as manifested in their interactive efforts devoted to a focal object” (Kleinaltenkamp et al., 2019, p. 12) to change norms and practices for societal well-being.

**Design/Methodology/approach** – Drawing both on marketing and psychology literature as well as on practice-driven institutionalism, we propose two mechanisms to achieve the emergence of collective engagement, and thus of the alignment of concurrent dispositions and behaviors of two or more individual actors devoted to a focal engagement object – social learning and behavioral synchronization.

**Findings** – Based on the aforementioned theoretical foundations, we develop a three-stage model of engagement-driven institutionalization for social purpose that consists of (1) the synchronization of collective dispositions and behaviors, (2) the development of a temporal stability of these behaviors through self-reinforcing mechanisms and emotional and social contagion, resulting in practices and (3) the ensuing institutional change.

**Research implications/limitations** – The paper offers a conceptual model of how ecosystem well-being can be achieved through collective engagement with social purpose. It thus helps understand the mechanisms by which collective engagement forms. The proposed relationships will be tested empirically based on the development and validation of a scale to measure collective engagement as well as by experimentally analyzing the emergence of collective engagement.

**Practical implications** - Managerially, the results can support ‘non-profit’ as well as ‘for-profit’ businesses in their efforts conducting social purpose endeavors.

**Originality/value** – This is the first study to develop a conceptual model that shows the mechanisms of how individual engagement dispositions and behaviors emerge toward collective engagement dispositions and behaviors and how these stabilize over time.

**Key words** - Collective engagement, social learning, synchronization, practice-driven institutionalism

**Paper type** – Conceptual paper / Research paper

## **Towards dynamic decision-making in service organizations: insights from systems thinking**

*Koskela-huotari Kaisa, Carrubbo Luca, Toli Angeliki M.*

**Purpose** – Service organizations operate in an increasing complex and uncertain context that brings forth new requirements for strategizing and organizational decision making. While some contributions have already started to pave the way toward a more systemic understandings of decision-making (e.g., Badinelli et al., 2012), the large-scale adoption of such an approach in both theory and practice is missing. The aim of this paper is to further this shift of understanding of organizational decision-making through a more dynamic and holistic approach in service research.

**Approach** – This conceptual paper follows the process of theory adaptation from Jaakkola (2020) and uses systems thinking (e.g., Meadows, 2008; Mele et al., 2010; Barile et al., 2012) as a method theory to inform and revise the current understanding of decision-making in service organizations. Systems thinking is chosen as the method theory as it provides the lexicon and conceptual tools for theorizing about decision-making under the conditions of uncertainty and complexity, and in doing so, helps to tackle three reductionistic assumptions that are particularly problematic and limiting in the current literature.

**Findings** – We problematize the current literature on organizational decision-making in service research in dialogue with insights from systems thinking and identify three reductionistic assumptions. We then develop three alternative, system thinking-grounded assumptions that provide the foundation for the more dynamic decision-making practice in service organizations. These dynamic decision-making assumptions are: 1) Decision making is an interconnected activity, 2) Decision making deals with a continually changing context, and 3) Decision making is inter-subjective and heuristic.

**Research implications** – We contribute by developing a research agenda to guide further research in this area. We also offer tools and practical guidelines that help service organizations to embrace more dynamic decision-making practices in their everyday operations.

**Originality/value** – This paper complements previous studies that draw from systems thinking to inform organizational decision-making in service organizations by identifying problematic assumptions in current theorizing and providing them dynamic alternatives. In doing so, the paper offers the essential ground work that can revitalize the field of service management and equip it for facing the challenges that service organizations are encountering in the 21st century.

**Key words** – Decision making, systems thinking, service research, service management

**Paper type** – Conceptual paper

## **From “institutions” to “institutionalized social structures” – bringing a more nuanced understanding of institutions to s-d logic**

*Koskela-huotari Kaisa, Vink Josina*

**Purpose** – Since the “institutional turn” in service-dominant (S-D) logic (Vargo, 2018), there has been an increasingly widespread use of the concept of an ‘institution’ to aid in understanding a variety of service-related phenomenon (Koskela-Huotari et al., 2020). Within S-D logic, institutions are understood as “humanly devised rules, norms, and beliefs that enable and constrain action and make social life at least somewhat predictable and meaningful” (Vargo and Lusch, 2016 p. 11, based on Scott, 2001). This means that, in essence, all social structures are assumed under the label of an institution. We argue that this sweeping use of the term ‘institution’ limits the theorizing potential of this important development in S-D logic and that a transcending processual understanding of institutions is needed to support more nuanced theoretical developments within the metatheoretical framework. The purpose of this paper is to propose such alternative frame for thinking about institutions in S-D logic.

**Approach** – This conceptual paper draws from seminal contributions in organizational institutionalism (e.g., Barley & Tolbert, 1997; Jepperson, 1991; Zucker, 1977) and the broader sociological literature around institutions and social structures (e.g., Berger & Luckmann, 1967; Giddens, 1984; Sewell, 1992) to inform the conceptualization of institutions in S-D logic.

**Research implications** – We suggest the need to shift our language of theorizing from “institutions” to “institutionalized social structures.” This shift acknowledges that institutions are social structures that have over time *institutionalized*, meaning that they have gained a presumed objectivity or a ‘law-like’ status (Berger and Luckmann, 1967) and become “reproductive processes” (Jepperson, 1991, p. 144). This language further implies that only the most highly entrenched and widely-spread social structures are called as institutions (cf., Giddens, 1984). Furthermore, enabled by such a framing, we bring forward a deeper understanding of the evolving properties of social structures through the processes of institutionalization and deinstitutionalization. We also explicate the process mechanisms that contribute to changes in the properties of social structures over time.

**Originality/value** – The more nuanced, processual view of institutionalized social structures brought forward in this paper contributes to the evolving S-D logic narrative by offering sharper tools for theory building, particularly in relation to change and stability in value-creating service ecosystems.

**Key words** – Institutions, institutionalization, social structures, service-dominant logic

**Paper type** – Conceptual paper

# Emerging data-driven service innovation and ecosystem in the construction phase of the smart building

*Lappalainen Inka, Aromaa Susanna*

**Purpose** – In the smart building context megatrends such as urbanization, sustainability and digitalization open up unique new value creation opportunities. At the same time, they challenge the established value creation and institutional logics in industries such as construction and facility management. There is a particular need for empirical studies that adopt a networked and systemic life cycle perspective in data-driven service innovations. This study contributes by studying such innovations building agile hybrid (building and digital) platform structures and capabilities for the smart buildings already in the early construction phase. By adopting S-D logic as a theoretical approach, this paper examines co-innovating data-driven service innovation in an emerging ecosystem to tackle significant productivity challenges and serve multiple beneficiaries in the smart building context.

**Methodology** – Longitudinal case-study approach was applied to examine empirically the stepwise collaborative innovation process by focusing on so called initiating phase from the iterative design to gather lessons learned from the first field experiment for the POC (proof of concept). Aligned with the process, two-phased interviews of different involving actors in addition to weekly meetings and field visit were implemented between September 2020 and April 2021. Altogether 25 thematic interviews were conducted including representatives from various involving actors such as builder, supplier and equipment rental in addition to system integrator, technology integrator, connectivity provider and data analytics and application specialist.

**Findings** – The empirical findings reveals complexity, uncertainties and dynamics of the construction phase in terms of multiple actors, physical building platform, and related knowledge-centric activities and value creation processes. Similarly, they explicate multiple new value creation opportunities enabled by data-driven service innovation not only for beneficiaries in the construction, but throughout smart building life cycle. Specifically, findings show dynamics in roles, resource integration and value expectations of involving actors when setting the mutual target, re-focusing, designing and experimenting the innovation embryo as well as orchestrating the emerging ecosystem. Finally, findings seem to indicate complex tensions related to co-operation and competition, value creation and value capture, as well as autonomy and orchestration. They reflect on one hand generic critical co-evolutionary drivers of ecosystems aligned with previous (platform) ecosystem literature. On the other hand they reveal specific institutional logics in the smart building context, particularly in the construction phase.

**Research limitations** – Empirical study is based on a single case study aiming to deepen understanding and open avenues for further studies. Focus is also on the initiating phase, though being critical in ecosystem level co-innovation.

**Practical implications** – For practitioners the paper provides deeper understanding about the complex contextual settings of the construction, where also the basis for hybrid platform structures are established for the smart building life cycle. Further, findings support involving actors to analyze their roles, resources and value expectations when co-innovating in an emerging ecosystem.

**Originality/value** – There is still needs to shift the research focus from firm-level to eco-system level composition of value propositions and service innovations. Thus the study narrows the identified research gap considering the lack of empirical research on the multi-actor and inter-organizational settings of service innovation. Aligned with S-D logic, instead of only focusing too narrowly on innovative offerings or the innovation process, essential is to understand service innovation by paying attention to the multiple actors, resources, and institutional arrangements at different levels.

**Key words** - S-D logic, service innovation, ecosystem, construction, smart building

**Paper type** – Research paper

# The meaning-ladenness of value in Service-Dominant Logic

*Löbler Helge*

**Purpose** - Service dominant logic states that “value is meaning laden”. When actors cocreate value they (re-)interpret symbols and interactions depending on the context they are in and thereby cocreate meaning. That is, they cocreate a ‘sense’ of what they are doing. While meaning has been discussed in connection to products and technology in an GDL frame this paper reflects dimensions of meaning in an SDL frame to better understand the meaning ladenness of value.

**Methodology** - The paper builds on second order cybernetics particularly on recursive operations. In a normal operation there is input and output. In a recursive operation the output is taken as input again. If one for example translates a sentence from English (input 1) into Italian (output 1) with an IT-algorithm and then takes the Italian translation (input 2) and translates it back into English (output 2) this is a recursive operation. If output 2 is the same as input 1- which is not necessarily the case - the recursive operation is stable. In real live recursive operations are ongoing processes. Invariants of recursive operations serve as meaning providers.

**Findings** - The paper identifies ‘language’, ‘practices’, ‘sources’ and ‘context’ as four dimensions of a space in which meaning unfolds when value is cocreated. Language: On “Auto Simple” (Auto Simple, 2017) for example, people argue that cars have “distinct human visages” and so cars need names. Descriptions correspond to meaning. Practices: In a community of therapists, for example, the word ‘regression’ is related to the practice of reversion to an earlier mental or behavioral level. In the community of statisticians, the word ‘regression’ is related to the practice of making a functional relationship between two or more correlated variables. Sources: It means something different if the chief physician or a nurse tells you that you probably have cancer. Context is obvious when talking about value in context. When offering value propositions the understanding of these meaning dimensions supports the cocreative process of value cocreation.

**Originality/value** - To my knowledge this is the first paper that unfolds the meaning-ladenness of value in SDL. Thereby it offers a space in which actors can think and discuss value propositions and value cocreation processes.



## **A service ecosystems perspective on decommissioning of offshore platforms: highlights by the Italian context**

*Loia Francesca, Basile Vincenzo, Capobianco Nunzia, Vona Roberto*

**Purpose** – Nowadays, the decommissioning of offshore platforms has been increasingly discussed because of its great social, economic, and environmental impact. The large number of actors involved and the complexity of regulatory framework push as well to adopt an ecosystems view able to explore the different resources, value propositions and co-creation practices arising from actors' engagement.

**Methodology** – This study is based on semi-structured interviews conducted with oil and gas key informant and stakeholders related to the Italian context.

**Findings** – The results of the analysis highlight the main ecosystem's elements at micro, meso and macro level related to the actors, resources, technologies, institutions and value propositions occurring in the Italian context of offshore platform decommissioning.

**Research Implications** – This work shed light on the importance to adopt a sustainable perspective as a critical driver in the predisposition of a governance framework relates to the future of the offshore platforms. In this sense, the study highlights several implications for both researchers and professionals in the field of governance and in the oil and gas industry.

**Practical Implications** – The results of the analysis underlined the great potential of a sustainable approach to the offshore platform decommissioning process. In this regard, offshore green farms, along with aquaculture and other local entrepreneurial activities, have emerged as suitable candidates for the co-location/multiple use of these assets and as a viable economic and social stimulus.

**Originality** – This work adopts an ecosystems view in order to re-read the Italian oil and gas industry and explore the different resources, value propositions and co-creation practices arising from actors' engagement. The analysis reveals that understanding the participation mechanisms utilized by communities is fundamental for improving the management and success of sustainable development in the context of offshore platforms decommissioning.

**Keywords** - offshore platform, decommissioning, service ecosystem, sustainable development

**Paper type** – Empirical paper

## **Service Offshoring: Current Issues and New Research Directions**

*Malik Radoslaw*

In the context of the debate on offshoring of business activities this paper delineates the conceptual boundaries of service offshoring and reviews service offshoring as a distinctive research direction. Science mapping analysis is used to deliver an unbiased, algorithm-based insight into the service offshoring thematic landscape to support literature review with the aim to identify key contributions and novel research directions. Keyword cooccurrence bibliometric data from 602 service-offshoring-related WoS indexed articles are analysed with SciMAT software. Visualisation of 18 key themes and their thematic networks is provided in a strategic diagram. The results confirm the importance of salary arbitrage, efficiency improvement and service quality related themes in the service offshoring thematic landscape. Moreover, new themes related to knowledge, innovation and human capital are identified as prospective research directions in service offshoring. The contribution of this paper is threefold. Firstly, the broad literature on service offshoring is mapped and the nascent synergies relating to research opportunities are highlighted. Secondly, this paper elaborates the distinction between “service offshoring” and “business service offshoring” which frequently remains vague in the research. Thirdly, this paper suggests ways to navigate a largely dispersed discussion on service offshoring and offers a clearer research agenda to improve its exploratory and explanatory potential.

## **The use of smart technologies to facilitate patient engagement in healthcare services: the Medicinae case study**

*Marzullo Maria Luisa, Di Bernardo Irene, Mele Cristina, Russo Spena Tiziana*

**Purpose** - In the service literature, the patient engagement is defined as a three dimensional construct, composed by behavioral, affective, and cognitive dimensions (Osei-Frimpong *et al.* 2016). Although many studies have focused on the analysis of engagement processes in the healthcare context (Oldenburg *et al.* 2013; Milani *et al.*, 2017), we still need to clarify how recent technological advances impact the three-dimensional construct of patient engagement (Lee, 2018). The purpose of this research is to understand how smart technologies foster patient engagement, by investigating the effects of their use on the cognitive, behavioral and affective dimension of patients' engagement in smart healthcare services.

**Methodology/Approach** - This research adopts a qualitative approach to explicate complex issues and advance extant knowledge (Dubois and Gadde, 2002; Gummesson, 2005, 2017). The study focuses on smart technologies implemented by Medicinae, with an application of information retrieval, automated reasoning, and knowledge representation. Medicinae is a state-of-the-art surgical clinic that makes use of intelligent technologies for the management of the patient workflow. The research process followed two phases. The first phase concerned the investigation of how smart technologies function. Semi-structured interviews with technology developers offered preliminary insights (on the features of A.I ) that impact patient engagement. The second phase was based on an in-depth analysis of technologies implemented in Medicinae. Semi-structured interviews with patients and Medicinae staff were conducted to elicit the investigated phenomena' patterns, concepts, and categories (Gummesson, 2005).

**Findings** - The results offer the opportunity to see how smart technologies are becoming an integral part of the new path of the health service. Smart Technologies are providing a new approach for patients to receive the right healthcare at the right time, for example by enabling on-demand access to content, care and resources for the condition without imposing time and place to request information, enabling a speeding up interaction (Behavioral engagement). The results will also show that the introduction of smart technologies will be able to allow patients to continue their care independently, keeping their vital parameters under constant control and having the opportunity to interact with the doctor in case of need enabling a healthcare personalized experience (cognitive engagement). This represents a first step towards the emotional involvement of the patient in a reactive and conversational way (affective engagement).

**Originality/Value** - This study contributes to research on patient engagement in the healthcare contexts where AI plays an increasingly important role. The research offers a deeper understanding of the new dynamics and actors that improve “smart” patient engagement. Finally, this opens up new possibilities for researchers and managers who design patient engagement involving tech.

**Keywords** - smart technologies; patient engagement; smart patient engagement

# **How Digital Services Are Reshaping the Dating Practice: An Institutional Theory Perspective on the Digital Dating Service Ecosystem**

*Masè Stefania, Minina Alisa, Smith Jamie*

**Purpose** - In this study we build upon Institutional Theory and Service-Dominant logic in order to highlight how the broader societal dating culture is currently shaped by market actors operating within the digital dating service ecosystem. With the aim to advance our understanding of the ways in which service market actors engage with their institutional environments, we adopt an institutional work perspective to explore how relationships and routines have been recently profoundly challenged by powerful digital dating services.

**Study design/methodology/approach** - In this study we draw upon twenty-one institutional biographies via semi-structured interviews with male and female online dating services users. We engage with consumer narratives of their online dating experiences in order to understand how they create, maintain, or disrupt dating practices massively impacted by the online service ecosystem.

**Findings** - A series of normative and regulative structures have already been accepted by users and non-users of dating services concurring to their legitimation. The same legitimation is now recognized on the web dating market, but the acceleration of the exchanges assured by the digital component together with the multiplication of choices negatively impacts singular actors' well-being.

**Originality/value** - we use the institutional work perspective to observe how the practice of dating has recently been profoundly disrupted by the digital dating service ecosystem.

**Social implications** - The operational efficiency and growth of worldwide dating services is not disputed. Nevertheless, an institutional work perspective on the human-centered outcomes reveals important social, existential, psychological and physical well-being issues for the actors.

**Keywords** - Service Dominant Logic, Institutional Work, Digital Dating, Institutional Theory, Human well-being

# **Artificial Intelligence as a driver to enable Healthcare Service Ecosystem viability**

*Masucci Armando, Megaro Antonietta*

**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

## **Optimizing service value creation with smart, connected products**

*Meierhofer Juerg, Heitz Christoph, Hannich Frank*

**Purpose** – This paper describes a novel quantitative model for the design of the service interactions in the life cycle of customers using smart connected products – typically in industrial environments, i.e., in Industry 4.0 context – with the goal of optimizing mutual service value creation for both the customer and the provider.

**Design/Methodology/approach** – The presented novel methodology is based on a quantitative system modelling of the mutual value creation both for the customer and the provider as a function of the provider's effort to leverage the data of smart connected products, by focusing on the customer's perceived value, on the one hand, and the provider's value, on the other hand. The impact on value creation is modelled independently for the customer and the provider, respectively, within their specific value framework. For optimizing value creation, a multi-objective optimization approach is applied.

**Findings** – The quantitative model considering the provider's and customer's benefits and efforts reflects that utilizing data resources of smart connected products impacts the mutual value creation in different ways: first, it impacts the customer's value in context. Second, it impacts the value created for the provider by influencing the customer relationship with effects on, e.g., customer lifetime value, acquisition, retention, or new service development, and by influencing the costs for service provisioning. The model captures both sides of the value creation as a result of the design choices. Based on this, approaches from multi-objective optimization are used for optimizing the value created both for the customer and the provider, leading to a subset of Pareto-optimal designs. The application of the quantitative model to typical actor to actor interactions shows that they are mostly not Pareto-optimal and thus have improvement potential for increasing total value creation.

**Research limitations/implications** – This conceptual model can (and should) be further validated and refined in practical business contexts. Possible extensions are discussed such as, e.g., a market model which relates the created customer value to market demand.

**Practical implications** – The model presented in this paper provides a new framework which can be used by firms for designing optimized services and optimize their offering and adoption by customers across the customer relationship lifecycle.

**Originality/value** – The innovation of this paper is the new approach quantitatively linking customer and product life cycle design choices to value creation.

**Key words** - smart services, smart connected products, customer relationship lifecycle, interaction modelling, value creation

**Paper type** – Conceptual paper

# Customer Journey: A Bibliometric Review and Future Research Agenda

*Mele Cristina, Di Bernardo Irene, Spano Maria, Russo Spena Tiziana*

**Purpose** - Customer journey (CJ) concerns both real and virtual contexts and includes a sequence of phases, several relationships, multiple touchpoints, and multiple channels (Norton and Pine, 2013; De Keyser *et al.*, 2015; Halvorsrud *et al.*, 2016; Mele *et al.*, 2021). An understanding of the customer journey is useful for the further conceptualization of consumer buying behavior. Close to the studies on customer experience (CX) (Lemon and Verhoef, 2015), the recent focus on CJ is an outcome of a transitory shift “from relationship marketing (the 1990s to 2000s) to customer engagement (2010s) and customer engagement to CX” (Sindhu and Barti, 2020, p.2)”. CJ literature has grown more than sevenfold over the last decade (Tueanrat *et al.*, 2021) but based on authors’ knowledge and extant review of CJ literature, no studies have used bibliometric analysis to figure out the development of the field. This kind of analysis allows us to identify the meaningful patterns and trends of the published studies. Thus, the main purpose of this research is to critically analyze Customer Journey literature, to identify the research gaps and to set future research agenda.

**Design/Methodology/Approach** - This work is based on a bibliometric analysis. To retrieve all publications of Customer Journey, we queried the *Web of Science* (WoS) indexing database on August 3rd, 2021. A total of 399 publications published between 2001 and 2020 were retrieved from the WoS to investigate the genesis and development of themes within the literature. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was used for the selection process of the publications (Liberati *et al.*, 2009).

We choose bibliometric analysis to uncover main customer journey-publishing journals, authors, and influential CJ articles (2001-2020). Finally, using network analysis, prominent Customer Journey themes are also unveiled.

**Findings** - The results provide an instructive perspective on the current research and future directions in the study of Customer Journey, which may help researchers choose suitable cooperators or journals, and promote their research. In addition, to see how keywords are related as well as their importance, we also conduct a keywords co-occurrence network, and to identify both the clusters as well as their density and centrality, we developed a thematic diagram. We map the identified research themes based on their anticipated centrality and density. Finally, to inform the future research agenda this research provides research questions that remain currently unanswered in the field.

**Originality/Value** - To the best of our knowledge, this is the first study aimed at evaluating the evolving trends of CJ from a quantitative viewpoint applying a bibliometric analysis. maps out the gradual advancement of the field over the years. Furthermore, important avenues for further Customer Journey research are also revealed.

**Keywords** - customer journey, consumer journey, bibliometric analysis, network analysis

**Paper type** - Review paper

## **Optimizing circadian rhythm for well-being: Value co-creation using Machine Learning**

*Morande Swapnil*

**Purpose** - Circadian rhythm is the natural cycle of physical and mental changes that are also termed as the “body’s clock.” It can affect sleep, appetite, and other important body functions. This study focuses on our health, keeping ‘sleep’ as a critical factor to provide a reflection on an individual’s well-being.

**Design** - The research uses quantitative data retrieved from various stages of sleep using healthcare IoT devices. It utilizes ‘Logistic regression’ to develop a Machine Learning (ML) model. Such a predictive model can depict the value co-creation achieved in the healthcare context.

**Findings** - Abnormal circadian rhythms can be linked to sleep disorders, and analytics on the same may help achieve improved sleep. The proposed research further offers valuable insights into the actors that affect human circadian rhythm.

**Implications** - A compromised sleep may also have enormous repercussions that may lead to deterioration of health. A data-driven analysis may help people increase self-efficacy and, simultaneously, offer cognitive assistance to health providers. Additionally, the same may reflect on the betterment of blood pressure, cellular growth & cardiovascular efficiency.

**Originality** - The research contains an experimental setup that deploys data science for predictive analysis. It demonstrates the consideration of crucial actors that could offer enhanced alertness, improved coordination, and quick reaction time, resulting in the well-being of health.

**Keywords** - Artificial Intelligence, Data Science, Circadian Rhythm, Sleep Pattern, Well-being



## Complexity in systems thinking and dynamic capabilities framework

*Moretta Tartaglione Andrea, Granata Giuseppe, Cavacece Ylenia*

**Purpose** – The Covid-19 pandemic increased the level of complexity of the environment in which businesses today operate and compete. In all industries, firms are facing the need to adopt new strategies to deal with emerging challenges, many changes, and increased degrees of uncertainty. This work aims to offer a contribution to the study of complexity through a conceptual comparison and integration of the Dynamic Capabilities framework and Systems Thinking.

**Design/Methodology/approach** – After identifying and analysing the main contributions provided by the Dynamic Capabilities framework and the Systems Thinking to the study of complexity, this paper highlights the links between the two research fields, showing how, on some specific aspects, they can be integrated and complement each other.

**Findings** – The study identifies several links and possible integrations between the research strands of Dynamic Capabilities and Systems Thinking, with particular reference to the Viable Systems Approach (VSA). Among them, both theories agree on the importance of the knowledge process, which in Dynamic Capabilities occurs through *sensing* capabilities (abduction), while in VSA is described through three inference modes (abduction, deduction, induction). According to VSA, when the observed phenomenon is not referable to any of the interpretative schemes possessed, the decision-maker must develop new capabilities, which could be traced back to the *seizing* capabilities. Moreover, VSA describes better the *transforming* capabilities, which refers to an ability to recombine and to reconfigure assets and organizational structures, introducing different interventions: adjustments, transformations, restructuring, and reconversions.

**Research implications** – In a period characterised by increasing levels of complexity and uncertainty, this work suggests to scholars to adopt new visions and deepen the study of complexity by integrating and comparing existing theories.

**Originality/value** – Although some previous works have shown certain common features between Dynamic Capabilities framework and Systems Theories, the links between them have not yet been studied in depth. This work represents a first step in this direction.

**Keywords** - Dynamic Capabilities, Systems Thinking, Viable Systems Approach, Complexity

**Paper type** – Conceptual paper

# Algorithmic technologies in organizing food supply

*Paavola Lauri*

**Purpose** - To better understand how the organizational aspects of food retailing, we study the introduction and diffusion of algorithmic technologies drawing on data from the UK food retail market. We are particularly interested in how algorithms have changed the nature of distribution – moving from a focus on products to a focus on customers, their behaviors, and the associated data analytics.

**Design/methodology/approach** - Theoretically, we draw on a performative perspective of technologies and thus a practice-based understanding of the recursive interaction between people and technologies over time (Orlikowski, 2000; 2007). Studying the generative character of algorithms in the organizing of food systems, we explore how algorithms have built on the preferences of consumers, turning the sourcing of food into a highly automated transaction. Our paper, consequently, focuses on how algorithms are perceived and employed by food retailers and how this has changed the nature of food retailing in the UK over the last 40 years.

**Findings and practical implications** - The paper's contribution is twofold. First, by considering the use of algorithmic technology in food retailing, we shed light on how algorithmic technologies change the way in which food supply is organized. Examining the agency power of algorithmic technologies in the organizing of food distribution systems adds to our understanding of the generative and transformative nature of technologies (Barley, 1986; Orlikowski, 2007). This particular focus on big data and algorithmic technologies contributes to how such technologies are changing the way organizations function and it points to the challenges and opportunities that lie ahead of us (Constantiou & Kallinikos, 2015; Etzion & Aragon-Correa, 2016). Second, our study highlights the impact such transition has on how food is being viewed in our society. This adds to current research on how food markets have become increasingly driven by financial and economic considerations (Clapp, 2016; Ghosh, 2010).

**Originality/value** - In contrast to the attention that customer data attracts in practice as well as in marketing research, theorization and detailed empirical investigations focusing on how algorithms and big data have impacted the organizing of food distribution are rare.

**Keywords** - algorithms, big data, power, Transparency, technology-in-use

**Article classification** - Research Paper

# **Gamification and service quality to incentivize shared micro-mobility services in Italy.**

## **An empirical study**

*Pasca Maria G., Guglielmetti Mugion Roberta, Di Pietro Laura, Renzi Maria F.*

**Purpose** - The present study aims to understand user perceptions of service quality and gamification mechanics in shared micro-mobility services.

In the last years, there has been a growing interest in sharing mobility for the potentiality to generate a positive impact on sustainability and a greater awareness of environmental issues. In addition, the COVID-19 pandemic had a crucial effect on the actors involved in the transport sector, accelerating interest in issues related to sustainability. Furthermore, the Agenda 2030 recognized sustainable mobility as a priority connected to service quality management practices: it's necessary to improve the safety and quality of the service provided (SDG-11.2), and promote an accessible and flexible solution that reduces emissions (SDG-13).

Sharing mobility, disruptive technologies and quality management are related to pursuing sustainable development. In this regard, several mobile applications have implemented gamification mechanics to create and increase user engagement and influence users' behaviour, such as encouraging sustainable practices.

**Methodology** - The authors developed a theoretical framework that investigates the service quality role on user satisfaction on shared micro-mobility services and analyzes whether the intention to reuse these services changed after the pandemic. In addition, the effect of game mechanics on users' loyalty and service quality is analyzed. The research performed the qualitative analysis with in-depth interviews and quantitative analysis (questionnaire). Thereafter, the theoretical model was analyzed through structural equation modelling (SEM) statistical techniques.

**Findings** - Findings confirmed that service quality, synthesized in quality of means and platform, is an antecedent to user satisfaction, influencing services loyalty. Gamification improves service quality and directly affects users loyalty.

**Practical implications** - The study highlighted the crucial role of service quality and gamification to promote and incentivize shared micro-mobility. To encourage sustainable mobility, the service quality must be improved considering users' needs: convenience, reliability, safety and availability of vehicles and the ease of use and security of the platforms. Gamification mechanics educate users to report broken or badly parked vehicles, generating useful information for mobility operators.

**Originality** - This study uniquely contributes to an understanding of the linkage between service quality and gamification. The results provide insights for mobility operators to improve the service quality and for policymakers to promote sustainable mobility and support the recovery from COVID-19. The study highlighted that gamification is a useful tool for changing transport habits, generating knowledge of environmental issues by educating and raising awareness among citizens.

**Keywords** - service quality, gamification, sharing mobility, micro-mobility

**Paper type** - Research paper

## Value co-creation ‘gradients’ in human-machine interactions

*Polese Francesco, Dragoicea Monica, Wallezky Leonard, Carrubbo Luca, Romanovská Františka*

**Purpose** - Today, decision-making processes are increasingly data-driven, decisions more ‘informed’, the exchange of information is rapid (often in real-time), it can be precise, punctual, efficient and valid. Nevertheless, the risk of ‘data-deluge’ and the difficulty of having useful elements is very high, while the possibility of making quick, accurate, thoughtful decisions becomes more and more necessary, indeed fundamental. In this sense, first in business, the evolution of A.I.-based DSS assumes increasing importance in many ‘moments’ of the service provision, both for diagnostics (descriptive-analytics), as well as in the assistance phases (follow-up-analytics) and even forecasting on possible future choices (predictive-analytics) and related reasons (prescriptive-analytics). However, value co-creation in human-machine interactions isn’t commonly agreed yet. So that, this manuscript aims to typology human-machines interactions based on an efficiency/effectiveness ranking and distinguishing/classifying precisely in terms of (possible) co-creation.

**Methodology** - This study is ‘desk’ and affects the need to update and integrate modern decision support systems for new strategies that managers ought to plan and follow, inside the uncertainty conditions in which business organizations continuously operate today. The RQ can be as follow: the value originating by a human-machine interactions can be defined as co-created? To properly answer this, an epistemological and typological work will be performed here, also leveraging on System Thinking mindset.

**Findings** - Findings are in terms of inedited gradients’ matrix of relationships among humans (first of all if individuals are involved in crucial decision making actions) and not humans (machines, algorithms, A.I. cognitive computing, neuronal networks, chat-bot, etc.), demonstrating which kind of interaction helps in overcoming the simple search of efficiency or standardized indicators and checks (typical of artificialities), usually when empathy and harmony between humans take place, and when not. Futhermore, typology of human-machine interactions for new value co-creation processes ranks will be outpointed, as well as new competences specific ‘scale’, in terms of language, learnings, know how, level of confidence, and knowledge endowment as a whole.

**Implications** - Managerial and practical implications could be in the sense of:

- i) nudges for Decision Support Systems, as they need to be much more customized in order to valorize different layers of relationships intensity;
- ii) insights identification for Decision Making AI users (managers, employees, human resource recruiters, etc.), with a focus on governance issues such as worker re-skilling for T-shaped professionals, management of organizations and territories, etc.

**Originality** - According to nowadays worldwide Literature, first in Service, every interaction is co-creative at all, even if involving not humans. Instead, a machine will provide more appropriate schemes, will gather more information, sometimes interacting emotionally with the most active subjects of the interaction (i.e. humanoid robots or animated software agents that recognize human affective intentions and to produce also emotive facial expression like disgust or happiness), but will not provide till-now a personal interpretative key or introduce the approaches needed for the effective co-generation of the value. This is exactly the aim to properly outline here.

**Keywords** - A.I., human-machine interactions, value co-creation gradients, DSS, decision making

# **Digitalizing value co-creation: how artificial intelligence redefines human-computer interactions in service ecosystems**

*Polese Francesco, Visvizi Anna, Troisi Orlando, Grimaldi Mara*

**Purpose** – Digital transformation is changing and disrupting the norms, rules and practices that guide value creation by reframing actor's roles and connections, their attitude and orientation, the way in which they exchange resources. The application of technologies to business processes can reshape (and at the same time obstruct or improve) people's interactions and improve their skills by giving birth to the co-development of new solutions that redesign traditional service provision and advance new means to manage old problems.

In this complex technological ecosystem, artificial intelligence (AI) can enhance the communication between providers and customers, help companies predict market changes and understand better users' behaviour. Hence, AI can contribute to boost the process of value co-creation. Over the past years, several studies explored the relationship between value co-creation, digital technologies and AI. However, there is still the need to detect how organizational structures, strategies and relational modalities should be refocused to co-create value in digital ecosystems through AI solutions.

**Design/ methodology**– The study aims at investigating: 1) how AI affects the micro (individual orientation and beliefs), meso (relational level of resources exchange) and macro (collective and institutional dimension) levels of exchange in service ecosystems; 2) how AI modifies the way in which organizations arrange and develop value co-creation by introducing and constantly renewing the rules, institutions, interaction modalities that guide service provision. The empirical research is based on a qualitative exploratory approach conducted through a multiple case study in which three service organizations that successfully implemented AI-based solutions over the last three years are investigated.

**Findings** –The results allow at introducing a framework that conceptualizes the enabling factors for value co-creation in AI-based ecosystems by providing theory and management with relevant suggestions on how companies can readapt their processes to comply with society's needs and evolution and to identify the strategies to engage users and orient their willingness to use technology to prevent the potential risks related to an inefficient use of these tools.

**Research implications** – The study can shed light on how organizations can maintain and renew relationships with and between actors by exploiting the different technological tools to engage users and discovering new ways of experiencing interactions. In this way, managers can understand how to establish a continuous tension towards transformation, change and innovation in a fast-changing world.

**Originality/value** – The research advances an integrated perspective that explores how the application of AI can boost the traditional ecosystems' enablers for value co-creation (individual skills, value propositions, resource integration, institutions, etc.) to support the emergence of new values that can reframe service modalities and practices to enable the constant transformation of ecosystems.

**Key words** – digital transformation; artificial intelligence; service ecosystems; human-computer interactions; value co-creation.

**Paper type** – Research paper

## Balanced Centricity: deinstitutionalizing the arts sector. The case of Patreon open platform

*Quero María J., Díaz-Méndez Montserrat, Gummesson Evert*

**Purpose** – Balanced centricity (BC) is an institutional logic that removes the customer from the central position in a network, thereby allowing other actors to engage in it more fully. This process, when systemized can be considered an institutional work (Larence and Suddaby, 2006) as it allows for identifying the processes and practices through which institutions are altered and eroded to the extent that they could be deinstitutionalized (Greenwood et al, 2017). The study disentangles the underlying processes of organizational change in the ecosystem, and proposes BC as the institutional logic that offer different organizing principles that shape the practices and beliefs of organizations (Koskela-Huotari et al, 2020).

**Design/Methodology/approach** – This paper is conceptual but supported by an illustrative case study: Patreon, which is considered as disruptive open platform that has broken the rules of exchanging resources among actors in the asrts sector. We develop a case-study and abductive research approach (Gummesson, 2017; Dubois and Gadde, 2014). This approach is considered useful for developing theories for managing new and changing contexts, by combining theoretical and empirical data. Abductive reasoning allows us the flexibility to design a nonlinear, non- sequential, and iterative process to link literature with empirical data, through which results based on literature can be reconceptualised, as suggested by the empirical findings.

**Findings** – The present paper aims to investigate how open business models like Patreon are a good practice example to test the institutional change that breaks with the traditional customer centricity institution to put in its place the network of actors that integrate the ecosystem. This change is identified at every level of the ecosystem. The empirical evidence of this process is found on Patreon where the process by which actor's accumulated and networked actions become a practice that makes the service ecosystem evolve and modify has been analyzed (Tronvoll, 2017; Chandler et al, 2018).

**Research limitations/implications (if applicable)** – Certain limitations to the study arise from the research context (the crowd-funding arts sector). The crowd-funding phenomenon is just one formula which, with the context offered nowadays by new technologies and the Internet, has found a suitable environment for certain projects. However, the evolution of the world of technology and the growing interrelation between actors will continue to facilitate the evolution of the models, shaping markets with an increasing role of all the actors in the network, moving towards what Gummesson (2008c) calls the many to many marketing.

**Practical implications (if applicable)** – The empirical approach of the paper is framed on crowdfunding, that is a fast-growing collaborative open network that, in success contexts like our case study (Patreon) meets the conditions of being an ecosystem where BC strategies can be strategically planned.

**Originality/value** – This paper addresses a gap in Service-Dominant logic, arts marketing and broader marketing literature by proposing Balanced Centricity as an institutional logic that has driven to institutional work. Two dimensions of the service-dominant logic are involved: (1) Service Ecosystems (FP 9/Axiom 3 and FP10/Axiom 4): “The benefit does not occur in isolation either, but rather through integration of resources from many sources, thus best understood as holistic experiences”; (2) Institutions (FP 11/Axiom 5), that explains the use of service ecosystems as the unit of analysis, as actors in its sphere share the same institutional logic. Also, reinforces Gummensson's contribution with a theoretical and empirical connection. Collaborative open networks, like Patreon behave under a BC position, breaking with the traditional customer- centricity perspective to put the network of actors in the core of all decisions. Following Brodie & Peters (2020, p.2), the empirical approach frames the midrange theory, which is “context specific (...) and provides frameworks that can be used to undertake empirical observation and models to guide managerial practices”. This perspective builds the theory-practice gap (Vargo & Lush, 2017; Gummesson 2004, 2017; Nenonen et al 2017; Fendt, Kaminska-Labbé, & Sachs, 2008), and frames the theoretical – empirical approach adopted in our work.

**Key words** (max 5) - Service-dominant Logic (SDL), balanced centricity (BC), institutions, crowd- funding, Patreon.

**Paper type** – Research paper

## **The mediating role of University-Industry linkages for value co-creation in Engaged Universities**

*Quero María J., Ventura Rafael, Martínez-Martínez Sofía L.*

**Purpose** – Linkages between university and industry (UIL) are considered a key factor in order to facilitate economic development as well as render benefits to universities and industry. They play a strategic role in building a engaged university. Adopting Service Dominant Logic perspective, authors develop the concept and strategic role of UIL in building a engaged university through the identification of actors engaged and an analysis of linkages among them. Linkages are presented as the basis to improve connectivity and enhance active resources through actor engagement (AE). Considering the university as a complex service and an ecosystem, we provide a deeper understanding of the role of linkages on the interplay between engagement disposition, engagement behaviors and relational connections within the service ecosystem.

**Design/Methodology/approach** – This paper is conceptual but supported by three illustrative case studies: Polytechnic University of Catalonia, Technical University of Madrid and *Link by UMA-ATech* (University of Málaga). These universities represent a national reference for their high activity regarding university – industry relationships, and their strategy designing linkages that improve resource density through actors engagement. We develop a case-study and abductive research approach (Gummesson, 2017; Dubois and Gadde, 2014). This approach is considered useful for developing theories for managing new and changing contexts, by combining theoretical and empirical data. Abductive reasoning allows us the flexibility to design a nonlinear, non-sequential, and iterative process to link literature with empirical data, through which results based on literature can be reconceptualized, as suggested by the empirical findings.

**Findings** – It is not the attributes of resources by themselves that make them valuable, but how the linkages among them are structured and managed. The present paper develops the strategic role of linkages in achieving a Engaged University (EU) as key to develop the idea of actor engagement (AE). The results represent a contribution to the theory, as it highlights the strategic mediating role of linkages between actor engagement and value creation. Implications for theory and practice derive from this approach in the context of the university-industry complex system management, in which many actors exchange resources at every level of the ecosystem (micro, meso and macro), resource density will depend on resource linkages.

**Practical implications (if applicable)** – The results of the research has implications for management, putting the focus of management in the university context on how resources are mobilized and linked. The stakeholder perspective identifies the university as a complex system where actors exchange resources. The service-dominant logic perspective gives all actors dual identities: they are both providers and value beneficiaries. The blurring roles of actors in systemic markets implies that the locus of value creation moves beyond the borders of the organization towards the linkages. Strategies for managing UIL are presented.

**Originality/value** – Hereto the mediating role of linkages in the university-industry context to improve value co-creation has not had enough theoretical nor empirical contribution. Literature demands for the development of knowledge in this context, as universities account for a high degree of resources and UIL can increase resource density if they are properly managed. The theoretical contribution of the present paper frames on the axiom 3/ FP 9 of service-dominant logic (all social and economic actors are resource integrators) and axiom 2 /FP 6 (value is co-created by multiple actors, always including the beneficiary). Brodie et al. (2019) frame on service-dominant logic to broaden the actor engagement theory from the dyad to the network. In this context, we frame our research on FP 3 of actor engagement (AE), which states that “AE is a multidimensional concept, subject to the interplay of dispositions and/or behaviors and the level of connectedness among actors”. The empirical approach frames the midrange theory, which is “context specific (...) and provides frameworks that can be used to undertake empirical observation and models to guide managerial practices” (Brodie and Peters, 2020, p.2). This perspective builds the theory-practice gap (Vargo and Lush, 2017; Gummesson 2004, 2017; Nenonen et al 2017; Fendt, Kaminska-Labbé, & Sachs, 2008), and frames the theoretical – empirical approach adopted in our work.

**Key words** (max 5) - Actor engagement (AE), service-dominant Logic (SDL), engaged university (EU), University-industry linkages (UIL), resource density.

**Paper type** – Research paper

# The Effect of Sales Assistant-Customer Interaction on Immersion inside Retail Stores

*Rancati Gaia, Barraza Jorge*

**Purpose of the Study** - In highly symbolic consumption contexts such as premium-luxury stores, the role of sales assistants is key to provide service to customers. Sales assistants and customers engage in a dynamic exchange where strong social-relational processes and uniqueness motives drive consumption. While most of this research relies on qualitative methods and self-reported measures, this study takes a neuroscientific approach by measuring the immersion, which is an experience of deep attentional and emotional involvement during the value co-creation. In particular, we assess the degree of sales assistants' immersion in two retail stores during the personal selling process, and how immersion affects customer purchase.

**Research Gap** - Although retailers have understood that value is always co-created through the interaction between sales assistants and customers, prior service research focuses on qualitative methods based on recall, without considering a neuroscientific approach to measure the attentional and emotional dynamic during the service experience. Furthermore, as technology swiftly advances, wearable and wireless devices allow neuro-data collection inside real settings, providing higher external validity results outside of the laboratory. Therefore, we propose that customers respond to high levels of sales assistants' immersion by increasing their purchase likelihood. We also expect that the high level of sales assistants' immersion and the visit duration led to greater interest and higher customers' purchase intentions. Lastly, we expect that the length of the relationship between sales assistants and customers positively impacts the immersion by increasing the purchase.

**Research Methodology** - We analyzed 49 unique service interactions (30F, 19M) in a study conducted in two retail stores. Biometric data was collected across the sales interaction using arm worn heart rate monitors on the sales assistant and processed using Immersion Neuroscience™, a platform which captures realtime neural signals associated with attention and emotional resonance. All interactions were timed to obtain visit duration data. Regression analyses were performed to predict purchasing behavior.

**Findings** - Results supported hypotheses 1, but not 2 and 3. The sales assistant experienced significantly higher immersion for clients that led to sales, versus non-purchase clients ( $t = 1.83(47)$ ,  $p = .03$ ). A logistic regression found that while immersion ( $b = 5.93$  SE = 2.56  $p = .05$ ), dwell time ( $b = 7.83$  SE = 84.95  $p = .005$ ), and loyalty ( $b = 4.03$  SE = 1.04  $p = .05$ ) all significantly predicted purchase, there was no significant statistical interaction found to support hypotheses 2 and 3. Moreover, we found that immersion was higher for new client experiences, versus those classified as loyal ( $t = 1.92(47)$ ,  $p = .03$ ).

**Originality/Value** - This paper is the first to use wearable sensors to analyze the sales assistants' neurophysiological responses during the value co-creation process in real retail settings. This study also demonstrates that neuro-tools can unveil the dynamic nature of service exchange and the effect on customer purchase.

**Implications** - Immersive retail experiences can be measured passively in real retail environments. While it is not known whether the retailer is mimicking the immersion of the customer, or vice versa, we find that the sales assistants can serve as a data source for gauging the likelihood of the service experience resulting in a sale. Future research should examine why sales assistants may be less immersed in sales interactions with returning customers.



## **Conversational agents to enact value propositions for an intimate, intelligent, and seamless experience**

*Ranieri Angelo, Russo Spena Tiziana, Tregua Marco, Mele Cristina*

**Purpose** - Value proposition is a key element in business debate; it recalls one of the building blocks of business models (Amit 2010), and it also describes away to drive value co-creation in service studies, thus expanding its effects to stakeholders instead of focusing just on B2B or B2C relationships (Vargo, 2011; Kowalkowski, et al., 2012). Nenonen et al. (2020) stressed the centrality of value propositions in expanding business opportunities for firms through the enhancement of resource integration, a collaborative process of value proposition, and new ways of communication to shape markets via value propositions.

Nowadays, new technologies bring a major challenge for firms as well as for society, due to the ubiquitous availability of firms' offerings (Nylén and Holmström, 2015; Li et al., 2018). According to some scholars value propositions turn into digital value propositions, a digital form of value demonstration (Ritter, 2020).

However in the new phygital era the focus is more on the integration of digital activities in the process of setting a value proposition thanks to a combination of new technology infusion, a strategic decision-making leveraging on customers participation in design, and a stakeholder-centric approach (Balakrishnan and Das, 2020). New tools to support value propositions with integration between different intelligent and assistive technologies (Chatbot, Ai, ecc.) are emerging. Generally, different terms are used as synonyms for "chatbots" in literature to describe instruments shaping the interactions with customers (Xiao and Kumar, 2021). These terms include "virtual assistants", "digital assistants", "conversational agents", "chatterbots" or "natural dialog systems" amongst others (cf. Bibault et al. 2019; Dale 2016; Shawar and Atwell 2007a; Tavanapour et al. 2019). These technologies, and especially those that foster communication, shape value propositions are still in infancy. There are not many detailed insights on the benefits of chatbots for this domain and there is little practical experience.

This paper aims at analysing the new forms of value proposition enabled by virtual or assistive bot.

**Methodology** - In order to deal with a complex social phenomenon and its dynamics, this study adopts a multiple case study method (Gummesson, 2017), representing qualitative research. In particular, the research process is developed in two different phases: one based on the analysis of 10 technology providers offering chatbot solutions, and one based on the examination of 28 firms implementing these chatbots solutions. The Technologies Providers are identified through a cross analysis of worldwide reports (Gartner and Forrester), aimed to have a wide overview on the key global players. This process led to obtaining a rich data collection and appropriate informations to describe (a) the main features of chatbots, and (b) the value proposition addressed through them. Subsequently, the analysis on the results of the firms implementing intelligent chatbots provided by the technology providers from the previous research step, led to highlight the value proposition addressed through chatbot from a different perspective. In particular, this second step required a data collection process, ranging from official company documents of the technology providers and of the firms implementing chatbots in their value proposition, such as website and archive documents, to online documents from multiple sources, as well as interviews, journals and published materials, in order to increase the confidence in the information and to stay up-to-date with an ongoing topic. This double perspective led us to bring a more solid approach to the analysis.

**Findings** - The preliminary findings offer the opportunity to advance the literature on value proposition as they show that chatbots enhanced value propositions by enabling three main aspects: information-based, content-enhanced and actor's integrated.

It supports companies in addressing greater customer intimacy with information-based value propositions. Value propositions improved with real time and personalised information, steering the way customers can be engaged and satisfied.

Also, chatbot supports an intelligent experience through the development of a content-enhanced value proposition thanks to their ability to look for opportunities that go beyond what the customer was expecting and to identify cross/up-sell opportunities that resonate with customers (i.e., the way languages, images, suggestions can be used to convey much more than a product and multiplying the opportunities for marketing activities as well as innovation).

Finally, it supports an integrated experience as chatbots can allow an actor's integrated value proposition. Indeed, integrated chatbot platforms provide customers both with interactions through multiple channels, and with the easy availability of information and resources taken from other business participants in ways to create significant value proposition both for customers and other partners.

**Implications** - This research has a three-fold contribution, as it infuses the role of chatbots in value propositions, proposes new opportunities for service studies, and sheds new light on service activities for practitioners. First of all, value propositions addressed with chatbot enrich the interactions between firms and customers as data and information are contextualizing value propositions, thus making firms' offering more customized and ubiquitously available; this expands previous studies (e.g., Nylén and Holmstrom, 2015) as the concept of intimacy shows the one-to-one relation that emerges between a firm and a customer. Additionally, the focus on chatbots describes a new way to integrate resources towards value proposition, thus the enhanced and collaborative process of shaping a value proposition (Nenonen et al., 2020) is confirmed and framed in a novel way depending on chatbots as agents communicating value propositions, collecting data, and co-constructing value propositions with customers.

Secondly, service studies on experience recently paid attention to the effects of the whole set of interactions a consumer may experience with a firm, leading to more empowered and participative customers, as stressed by Balakrishnan and Das (2020); the novel interactions depending on chatbots are not just ways to replace human-based interactions, but the inner intelligence of these interactions make value proposition wider, namely expanded towards new sales opportunities, enriched manners to engage customers directly, and a more aware process from both firms and customers due to the suggestions arising in the interactions. Therefore, these novel opportunities may bring new opportunities for service scholars to understand the co-creative effect of firms and customers via chatbots, thanks to their availability 24/7, the use they can make of data, and the expansion of the resource integration process to multiple actors. To sum up, chatbots-based value propositions integrate the resources, contributions, and intelligence - both human and artificial - of firms, consumers, and other stakeholders, paving the way towards new chances for value co-production and co-creation.

Finally, firms are already paying attention to what chatbots may offer, but due to the infancy of these new tools, further efforts are needed to shape the intimate, intelligent, and seamless experience through which marketers may offer more opportunities to shape value co-creation processes with customers and offer them an enriched experience starting from the value proposition itself.

**Key words** - chatbots, virtual assistant, conversational agents, digital value proposition, new technologies

**Paper type** – Conceptual paper

# Practice Disruption in Service Ecosystems: The Case of K2 2008 Disaster

*Razmdoost Kamran, Alinaghian Leila, Kutsch Elmar*

**Purpose** – Practices are integral part of resource integration within service ecosystems. Extant studies aiming to explain the dynamics of practices have predominantly focused on permanent change in service ecosystems. Nonetheless, unanticipated disruptions such as unanticipated war, accidents, power cut or illness create an unwanted, unplanned and in many cases unimaginable situational context for actors, forcing them temporarily to adapt their practices in a short period of time. In this study, we aim to unpack the enactment of physical, mental and social processes by which service ecosystem actors experience in managing such unanticipated disruptions.

**Approach** – We adopted an ethnographic approach in this study to account for observable actions as well as feelings, sense making processes and meanings associated to those actions. We chose K2 2008 mountaineering disaster as the context of our study, an event which has been accurately documented and has been visually recorded. Further reflexive interviews with key people involved in the incident provided the full understanding of the context.

**Findings** – We identified three key processes through which climbers made sense and managed disruption: 1) apprehension, 2) coping and 3) recovery. First, there have been multiple interpretations at multiple point in time of what the disruption was. Climbers' identity work was salient in this process, where they constantly defined and redefined themselves, their status and differences with others opposing their views. Second, the coping actions were improvised by the climbers and they (individually or collectively) engaged in boundary work to create new resources or bring new use to the existing resources. Third, the survivors and the families and friends of those suffered engaged with causal attribution, sense making and mending processes to recover from the course of events.

**Originality/value** – Our findings have implications for both service emergence and practice theory literature. We illustrated that practice disruption is a process, socially constructed by service ecosystem actors. Actors respond to disruptions to defend, enhance and recreate their resources and use their apprehension of disruption as a form of demythologizing practices to disentangle their engagement from a devaluing myth associated with the disruption. Furthermore, we indicated that service ecosystem institutions, their boundaries and identities defined within those boundaries disappear in the coping phase. In this setting, timeflow does not exist as no pattern of temporality is embedded in resources. Indeed, actors experience full power over institutions and boundaries, whereas they are bounded by time to create new resources and institutions.

**Key words** – Practice Disruption, Service Ecosystem Disruption, Service Ecosystem Emergence

**Paper type** – Research paper

# Digital therapeutics in healthcare ecosystem: a systematic literature review

*Ruggiero Andrea*

**Purpose** – Tremendous development in mobile technologies has emerged as a powerful tool in health care (Sedrati et al., 2016). Smartphone app, based on machine learning, flourished to address health issues, regarding i.e. mental health, circadian rhythm, diabetes (Cho et al., 2020). There are more than 400,000 healthcare apps available in the app stores but, according to the app usage data, most of the healthcare apps have less than 10,000 downloads (Georgiou, 2021). Moreover, in the last few years it emerged a need to involve expert healthcare professionals in the development of health apps and for healthcare providers to empower patients (Alhuwail et al., 2020), because it came up a failure in ensuring quality and safety control by App manufacturers and store managers, with particular regard to mental health problems and suicide (Martinengo et al., 2019). Consequently, digital therapeutics were born. A first definition in a published paper dates back to 2015, defining digital therapeutics as “evidence-based behavioral treatments delivered online that can increase accessibility and effectiveness of health care” (Sepah et al., 2015). Today, it is generally recognized that Digital therapeutics (DTx) are a digital health category defined by the Digital Therapeutics Alliance as products that “deliver evidence-based therapeutic interventions to patients that are driven by high quality software programs to prevent, manage, or treat a medical disorder or disease” (DTx Alliance, 2021). They are similar to popular wellness applications, but they focus on providing clinical results.

Over the past two years, the literature on digital therapeutics has grown at a tremendous pace. The study aims to systematically review the literature on digital therapeutics and to adopt the lenses of service research to identify the role of DTx in the healthcare ecosystem. Service ecosystems embeds the actors who are part of them to cooperate with each other through shared exchange logics and thus stimulate and facilitate the integration of resources, which leads to the creation of a 'network value' and, that is, the possibility of creating benefits for all the actors who are part of the network (Gummesson, 2008). With this in mind, there is a need to understand how digital therapeutics can be integrated into healthcare services as a means to facilitate interactions to create value for all the actors involved (patient, physicians etc.).

**Methodology** – For this paper, we firstly conducted preliminary interviews to DTx actors. Later, we identified and selected relevant articles by following the first four steps proposed by Kranzbühler et al. (2018): 1) identifying keywords, 2) peer-reviewing academic journals in English, 3) screening face validity, and 4) reviewing the full text of the remaining articles. In line with Tian et al. (2018), we search for peer-reviewed English-language articles in the following databases: ProQuest, Pubmed and Web of Science, which include a wide range of articles about digital therapeutics and allowed us to address every field of research, not focusing exclusively on management and business journals.

**Findings** – Our literature review led us to identify 7 macro arguments discussed in Digital Therapeutics literature: difference with apps; medicine benefits (abstinence, blood glucose, etc.); reimbursement and prescription; alliance; macroeconomics; market innovation and business model; technology.

Although most literature focused particularly on medicine and health analysis, there is emerging interest in addressing DTx in different subjects, such as in a macroeconomic or technological way. However, there is very scarce literature in service research, apart from one paper focused on market innovation.

**Research limitations/implications** - Our study is not without limits, which can be considered as fundamental preconditions for the development of future academic research. First, future service research could address the context of analysis of DTx, with a more in-depth analysis on value co-creation processes, actor engagement, service ecosystem. Digital therapeutics can represent an important subject for service research, mainly due to the disrupting role of technology in the healthcare ecosystem, strongly impacting on patient-doctor relationship and roles, physicians' decision-processes and healthcare provision.

**Keywords** – Service science; Digital Therapeutics; Value co-creation, Ecosystem

**Paper type** – Research paper

## **Actors' roles in service robotics ecosystems**

*Ruggiero Andrea, Laddaga Cesare, Del Vacchio Erica*

**Purpose** – The rise of research in the field of Artificial Intelligence (AI), Natural Language Processing (NLP), and development platforms such as the Robotic Operating System has enabled the rise in a class of robots called Service Robotics. These kinds of robots are primarily designed to interact with people (Wirtz et al., 2018) in a consistent human social manner, involving healthcare, education, media, entertainment and retail. In service research, scholars investigated the acceptance (Wirtz et al., 2018), anthropomorphism features (Goudey and Bonnin, 2016) and drivers on which service robotics impact (Xiao et al., 2021). Leveraging on S-D logic, service robots can be conceptualized as operant resources, which means that technology can act on other resources (Akaka and Vargo, 2013) and facilitates and limits human action through interpretative schemes, structures and norms. Service ecosystems embeds the actors who are part of them to cooperate with each other through shared exchange logics and thus stimulate and facilitate the integration of resources. This leads to the creation of a 'network value' and, that is, the possibility of creating benefits for all the actors who are part of the network (Gummesson, 2008). With this in mind, there is a need to understand how service robots can be integrated into hospitality services as a means to facilitate interpersonal interactions to create value for all the actors involved (developer, users, provider etc..) (Lu et al. 2019). Further, current research on service robots is fragmented and largely conceptual (Lu et al., 2019) and still lacks to adopt an ecosystem perspective in understanding the development and the adoption of service robotics.

**Methodology** – The study aims to map the service robot ecosystem to understand the roles and interactions that take place between the actors following a multi-level approach, (Akaka e Vargo, 2014): micro and, therefore, the company providing a service through the use of service robots; at the meso level, that is, within the identified technological context and finally, at the macro level and, therefore, the institutional context. To answer this aim, we use the qualitative methodology of case study as it provides a tool for studying complex phenomena in their contexts (Yin, R.K., 1992). This was undertaken by an empirical investigation of multiple case studies and, in particular, we chose evidence from hospitality context (eg. restaurant, hotel etc..), followed by an analysis of the collected data (Stake, 2005).

**Findings** – Producers and designers develop the social robots, starting from the technologies available on the market, making sure to offer companies a “standard machine” that can be later adapted to as many needs as possible, thus reaching a broader set of potential customers. The possibility of designing social robots that are “general purpose” does not exist and, therefore, it is necessary an additional step before the solution is ready to be adopted in the market. Responsible for this step are the robot developer companies, positioned between the customer companies and the manufacturer, that acquire the “standard machine” and adapt and customize the technology on the basis of its intended use, bridging the gap in the basic robot functionalities. Therefore, the relevance assumed by developer companies that adapt robots to the specific needs of user companies - and their consumers - emerges.

**Research limitations/implications** - Our study is not without limits, which can be considered as fundamental preconditions for the development of future academic research. First, future research could broaden our analysis sample and carry out a larger scale study. Second, future researchers could expand the context of analysis by extending research to other industries by validating our current findings. Finally, it could be interesting to expand the study with a more in-depth analysis on value co-creation processes.

**Keywords** – Service science, Service robot, Value co-creation, Ecosystem, Artificial intelligence

**Paper type** – Research paper

## **Institutions and customer experience: the role of interfunctional coordination.**

*Ruiz-Alba José L.; Quero María J.; López-Tenorio Pablo J.*

**Purpose** – This research investigates customer experience (Becker and Jaakkola, 2020) by understanding how interfunctional coordination (IC) integrates resources across departmental boundaries to create superior customer experience (Narver and Slater, 1990; Ruiz-Alba et al, 2020). In this context, institutions develop a strategic role in the formation of customer experience (Akaka et al, 2015) and IC can moderate the relationships between actor engagement, service design and customer experience.

The role of institutions and institutional arrangements (Vargo and Lusch, 2016; North, 1990) in the cooperation and coordination (Ostrom, 2005) of the complex and resource-integrated service-exchanges that IC involves is studied here to shed light on complex scenarios and to support decisions made in service exchanges (Gummesson, Mele and Polese, 2018). The experience is considered from an ecosystem approach.

**Design/methodology/approach** - Three sequential studies are conducted in pharmaceutical sector in B2B context as follows: 1) a focus group (5 participants); 2) in-depth semi structured interviews with senior managers (19 interviewees); 3) an online forum (8 participants). Followed by a calibration of responses and the subsequent fuzzy-set Qualitative Comparative Analysis using fsQCA software (Ragin, 2000).

**Findings** – Interfunctional coordination can moderate the relationships between a) actor engagement and customer experience; b) actor engagement and service design and c) service design and customer experience. Another finding is that service design can mediate the relationships between actor engagement and customer experience. The processes that facilitate IC should balance the negative effects of working in silos. Finally, IC facilitates satisfactory customer experience and several pathways have been found as causal configurations that facilitate interfunctional coordination of value cocreation to enhance customer experience.

**Research implications** – This study advances existing knowledge through an empirical investigation and academic discussion to enhance customer experience from an institutional arrangement's perspective and with a holistic view and to advance progress in the conceptualization of human actors within S-D logic (Kostela-Koutari and Siltaloppi, 2020).

**Practical implications** – It provides interesting insights for practitioners, especially top managers, about the barriers and enablers of IC and the best practices to enhance customer experience.

**Originality/value** – This is a novel approach to the fifth axiom / 11<sup>th</sup> fundamental premise of S-D logic: value cocreation is coordinated through actor-generated institutions and institutional arrangements (Vargo and Lush, 2016). The study of interfunctional coordination contributes to the clarification of institutions and institutional arrangements and its role on customer experience.

**Keywords** – Actor engagement, Customer experience, Service design, Interfunctional coordination

**Paper type** – Research paper (empirical).

## **Illuminating experience's inception and evolvement: an auto hermeneutic phenomenological inquiry**

*Sahhar Yasin, Loohuis Raymond, Henseler Jörg*

**Purpose** – Contemporary service literature generally agrees that experience is highly subjective and therefore dynamic and temporal in nature as it is phenomenologically determined by beneficiary at service encounters. While the service literature has greatly emphasized experience as in situ during service encounters, there is sparse knowledge about how experience is shaped and re-shaped before and after service encounters. The purpose of this study is to closely examine this relationship starting with the notion of experience inceptions, which are the moments that consumer experience commences.

**Design/methodology/approach** – To grasp the highly subjective construct of experience inception and making sense of the relationship between experience in service encounters and beyond, we rely on an auto hermeneutic phenomenological approach. This implied a systematic self-observation and deployment of techniques to directly access the entire 'lifeworld' experience spectrum as a consumer. In a nine-month period, data was collected about the entire experience spectrum of being a consumer in daily activities. Analytically, the hermeneutic cycle act as guidance in interpreting specific parts of the data whilst zooming out to the whole.

**Findings** – Preliminary findings deepens and expand experience's characteristics. First, we show that experience is eminently dynamic and sensitive to contingencies such as sudden twists and turns while still reaching out to the desired experience. In a broader sense, we uncover in detail triggers to inception and transitional features that drive experience as 1) lived-through, 2) living in situ and 3) imaginary, which account for actual and mental service encounters.

**Implications** – This study advances experience in service theory in multiple ways. We deepen how experience and therefore experiences of service consumption processes are formed and how they evolve. This in turn renders more contextual detail to the notion of journeys starting from the level of inception. Through the findings that detail how experience arises and evolves at consumers, practitioners can pose a more granulated view on consumers' stimuli that allows them to better anticipate on and 'manage' the value experience. Finally, this study expands the methodological underpinnings of experience by introducing the value of auto hermeneutic phenomenology as an effective data collection instrument to grasp subjective experiences in sequence.

**Originality/value** – This study poses a microlevel based and first-hand view on the deeper levels of experience in journeys. Furthermore, this study coins an auto hermeneutic phenomenological approach on experience in marketing theory, which sparks the discussion on using novel methodological approaches to investigate value experience.

**Key words** – Experience, inception, service encounters, auto hermeneutic phenomenology, systematic self-observation

**Paper type** – Research paper

## **Service Design Methodologies. A Systematic Literature Review**

*Salgado Maricela, Marcos Esperanza, Vara Juan M., De Castro Valeria, Martin-Peña Maria L.*

**Purpose** - Services are a very important part of the economy on a world-wide scale for its contribution to GDP and employment generation. The study of services is addressed from different disciplines. An essential part is how services are designed because it can be decisive in terms of achieving customer satisfaction. This study allows to identify and analyze the various existing methodologies that can be used to carry out the service design process.

**Design/methodology/approach** - We have carried out a systematic literature review on the basis of the guidelines proposed by Kitchenham through three stages, planning, execution and analysis of results. We propose five research questions in relation with method, methodologies, techniques, limitations and forums. A quality assessment is done analyzing each of the existing proposals considering key information as lifecycle, method, models, automation, co-creation, service-oriented, user-oriented, reengineering, value.

**Findings** - Of the total of 2850 studies found, 248 were considered relevant. 138 of these were considered to be relevant non-duplicated studies, 14 of which eventually became primary studies. These primary studies allowed us to obtain 7 proposals to be analyzed in depth. The study reveals the existence of certain methodologies that could be employed to design services. However, although we were able to identify the existence of new concepts related to the service sector, such as active participation, co-creation, user-orientation, reengineering and customer experience, the application of these concepts is still immature as regards service design methodologies.

**Practical implications** - The design of services is a holistic, multidisciplinary and integrating field, composed of different disciplines such as computer science, services, business, etc. Although the impact of this discipline is broad, there is little scientific literature on methodologies for service design, this study aims to show both the academic and business, the advances on this discipline and the possible improvements for future research that can be developed on Service design.

**Keywords:** Service design, Service innovation, Servitization, Systematic literature review



## **From Hospital to Home: Service and Systems thinking for effective, efficient and sustainable healthcare**

*Saviano Marialuisa, Perillo Claudia*

**Purpose** – In the context of healthcare, especially because of the aging population, the number of patients with chronic illness is growing determining an increase in the need for daily and long-term assistance and a shift from hospital to local and home care. To address this need, it is relevant the capability of providing effective care by appropriately integrating social and health services. Accordingly, by adopting a service and systems view, this study aims to investigate how the conditions for effective, efficient, and sustainable healthcare change when shifting service from hospital to local and home care.

**Design/Methodology/approach** – The paper starts with a literature overview aimed to explore the contribution of service and systems thinking to the modeling of effective, efficient, and sustainable healthcare. Then, in the light of the most relevant literature contributions, the main approaches to healthcare currently adopted in Italy are analyzed. Examples cases of the Regions' management of the COVID-19 pandemic are selected to identify elements useful to address the research question.

**Findings** – The study carries out an analysis of dominant approaches to healthcare in Italy in which the main elements of variety in play are discussed in the light of a service and systems thinking view. A framework of synthesis is outlined to compare hospital, local, and home care in terms of conditions for effectiveness, efficiency, and sustainability of service. The main interpretative hypothesis highlights the advantages as well as the criticalities of shifting from hospital to local to home care as a possible strategy for increasing the overall effectiveness, efficiency, and sustainability of healthcare service.

**Research limitations/implications** – The paper represents a standpoint of a study that will need further work to verify the arising interpretative hypothesis based on the theoretical and conceptual contribution of service and systems thinking.

**Practical implications** – The study provides a theoretical contribution to the modeling of healthcare indicating how the conditions of effective, efficient, and sustainable service can practically change when shifting from hospital to local and home care.

**Originality/value** – The paper provides elements for analyzing the conditions for shifting from hospital to local and home care appropriately integrating social and health services into the delivery system in order to increase the overall effectiveness, efficiency, and sustainability of healthcare.

**Key words** – Healthcare; Hospital care; Local care; Home Care; Systems Thinking, Service logic; Effectiveness; Efficiency; Sustainability; COVID-19 Pandemic.

**Paper type** – Conceptual/Research paper

## Codifying Brand Practices in Service Encounters

*Schau Hope J., Akaka Melissa A., Luri Ignacio*

In response to the pandemic, service providers, such as restaurants, retailers, grocery stores, beauty services, and gyms, radically changed their servicescapes, processes, protocols and scripts (Benach 2020). Customers wondered what services were available and how to safely interact with service providers. To help customers understand service availability and protocols, brand-related messages were sent out through digital communications and signs were posted on almost any surface possible (doors, walkways, chairs, tables, walls, and elevators). As safety standards evolve, it is difficult for service providers to ensure customers continue to know protocols regarding decreased/increased capacity, mask wearing, vaccine mandates and social distancing protocols - all of which have direct impact on service experiences.

The context of this study is global disruption (Campbell et al 2020) of a service encounter that inspires (re)codification of brand practices (Akaka, Schau and Vargo 2021). Brand practices are doings, sayings, and understandings (Schatzki 1996) that emerge as materials, meanings, and competences (Shove, Pantzar and Watson 2012) associated with a brand are linked together. Practice codification is required for customers, as carriers of brand practices, to link competences and meanings, which enable adaptation of new practices, such as mask-wearing, social distancing, and online ordering (Akaka et al., 2021). Our research questions are: 1) how are brand practices codified for customers in service encounters? And 2) what are the roles of service providers and beneficiaries in codifying brand practices?

Our empirical analysis focuses on a global coffeehouse, known for a complicated menu, with multiple ordering and fulfillment modalities (coffeehouses, drive-thrus, kiosks, and branded mobile app): Starbucks. We are interested in understanding interactions that involve specialized product knowledge, occur all or in part within physical servicescapes, and engage a variety of actors (e.g., customers, employees, consuming and non-consuming bystanders) in multi-sided interactions that contribute to the shaping of distinct brand experiences. We apply a service ecosystems lens (Vargo and Lusch 2011; 2017) to investigate service encounters across multiple levels of social phenomena by studying: practices and roles. A social role is “a particular set of practices that connects one actor to one or more other actors” (Akaka and Chandler 2011). At the practice level, we study the codification of particular practices that distinguish a brand and make it unique. At the role level, we examine the uses and meanings of interactional service roles and their associated scripts, which draws on the dramaturgical metaphor of service-as-theater (Grove and Fisk 2001), but also considers roles as collections of practices that can be enacted by different actors or by the same actors in different ways (Akaka and Chandler 2011).

Our data are comprised of firm, third party media and consumer data. They contain corporate websites, press releases, marketing communications, store signage, and interviews with Starbucks corporate employees, local store managers, baristas, and three focus groups centered on consumer responses to pandemic era service changes, e.g., masking, social distancing, and plexiglass barriers.

Our findings reveal that codification of brand practices in a service encounter requires encoding the service script and associated props for clear role expectations within the servicescape. We find that at the corporate level, Starbucks fashioned policies, protocols, and signage needed to conduct service encounters in the pandemic. The codification process requires the service provider and beneficiary to take on roles of both encoder and decoder and associated practices, such as scripting, signaling and storytelling (encoder) and observing, trying and interpreting (decoder), respectively. We find that brand practice codification is a recursive and dynamic process that involves multiple actors who take on different roles and are able to switch back and forth within a given service encounter. Our findings contribute to the understanding of how brand practices support service encounters by identifying multiple avenues for communication of associated competences and meanings. We contribute to understanding of roles by providing empirical evidence for the dynamics of roles, embedded with sets of practices, and how roles change depending on the practices that are enacted in different contexts. We learn that as contexts evolve so too do the practices, and thereby roles, needed for interaction and, ultimately, value cocreation.

## AI-based Value Co-Creation in Tourism

*Schmidt Rainer, Dacko Scott, Moehring Michael, Keller Barbara, Zimmermann Alfred*

**Purpose** – There are many possible applications of artificial intelligence technologies (Russell and Norvig, 2016) in tourism (Kazak *et al.*, 2020; Samara *et al.*, 2020; Tussyadiah, 2020). These include classic applications such as decision support and recommendation systems (Stalidis *et al.*, 2015), Data- centered platforms (Keller *et al.*, 2017), AI-based assistant platforms (Schmidt *et al.*, 2021), the Internet of Things as well as robotics (Ivanov and Webster, 2019). Using these technologies, it is possible to increase efficiency, productivity and profitability for tourism suppliers (Samara *et al.*, 2020). However, there is a general lack of academic research on AI and its connection to tourism. This has already been identified by Gajdošík and Marciš (2019). Aiming to create a rich and personalized experience, a more comprehensive view is necessary, which exposes the value co-creation potentials of tourism.

**Design/Methodology/approach** - Building upon service-dominant (S-D) logic (Vargo and Lusch, 2008) we draw on the definition of value co-creation (Lusch and Nambisan, 2015): that means as a set of actors (operant and operand) that integrate resources accepted and exchanged in an ecosystem regulated by institutional arrangements. We investigate for each phase of value co-creation the impact of artificial intelligence and examine in particular the effect of artificial intelligence resource liquefaction and resource density (Lusch and Nambisan, 2015).

**Findings** - AI is being used in the tourism industry for various purposes such as improving the level of personalization, tailoring the recommendations of the customers and guaranteeing fast response times even when the staff members are not present (Samala *et al.*, 2020). The presence of artificial intelligence has become so crucial in the industrial setting that it is being used to assist and communicate with the customers and thus strengthen the quality of engagement. The value co-creation logic of SDL is applicable for conceptualizing the use of artificial intelligence in tourism. Assistant platforms are providing generic actors with the help of AI. Artificial intelligence also supports resource liquefaction in tourism by applying cognitive functions and lowering the threshold for using resources, e.g., it increases resource density by leveraging automation for improving the matching between the experiences and tourist expectations. Furthermore, we identify how to leverage AI for value proposition, filtering, and service exchange.

**Research implications** – Based on our research the different applications of artificial intelligence for value co-creation mechanisms and their interplay need to be further investigated pointing to another field for future research.

**Originality/value** – Our research findings demonstrate the importance of S-D Logic for researchers and practitioners in connection with artificial intelligence in tourism.

**Key words** –tourism, artificial intelligence, value co-creation, SD-Logic

**Paper type** – Research paper

## Value Co-Creation on Assistant Platforms

*Schmidt Rainer, Zimmermann Alfred, Moehring Michael, Keller Barbara, Alt Rainer*

**Purpose** – Assistant platforms are becoming a key element for the business model of many companies (Schmidt *et al.*, 2021) (Alt and Reinhold, 2020) and are promising to further proliferate artificial intelligence technologies (Russell and Norvig, 2016) in everyday life. However, creating a platform is a high-risk endeavor: a large percentage of platforms fails because they do not attract enough users (Yoffie *et al.*, 2019). Furthermore, the establishment of a platform is a time critical endeavor (Parker *et al.*, 2016). It is therefore necessary to better understand the value creation of assistant platform-oriented business models in order to appropriately allocate resources during platform ramp-up.

**Design/Methodology/approach** - A first approach was to investigate network effects (Parker and Van Alstyne, 2005). Based on the SD Logic (Vargo and Lusch, 2016) Lusch and Nambisan (Lusch and Nambisan, 2015) developed a new approach and identified resource liquefaction and resource density as important factors for value co-creation on platforms. Resource liquefaction is the increase in the transferability of resources by replacing information from its physical representation (Normann, 2001). Resource density designates the easy access to appropriate resource bundles. We investigate the value co-creation on assistant platforms using the approach suggested by (Lusch and Nambisan, 2015) and evaluate the results using a cross-case evaluation.

**Findings** - The value-co-creation logic of SDL is applicable to assistant platforms. Assistant platforms support resource liquefaction by providing means for describing services (Hein *et al.*, 2019). Assistant platforms also increase resource density by accelerating the matching between the actors (Lusch *et al.*, 2010) and the increase in accessibility and availability of resources through the effective and efficient use of information. Using a four layer architecture of assistant platforms, we are able to conceptualize the value co-creation on assistant platforms. Four phases of value co-creation exchange of value proposition, filtering, and service exchange can be associated with four architectural layers of assistant platforms: cognition, capability, integration and coordination. Furthermore, we describe the ecosystem of assistant platforms. Assistant platforms enable service co-creation between several actor groups.

**Research implications** - Assistant platforms are ecosystems in themselves with their own dynamics. In addition to the well-known network effects, several different value co-creation mechanisms and their interplay need to be further investigated on assistant platforms pointing to another field for future research.

**Originality/value** – Our research findings demonstrate the importance of SDL for researchers and practitioners in connection with assistant platforms.

**Key words** – assistant platform, artificial intelligence, value co-creation

**Paper type** – Research paper

## **Co-creating value net for shadow destinations in Sweden**

*Schmudde Ulrich, Sorensen Anna*

**Purpose** - The purpose of the paper is to discuss the new value creation logic of value nets in the context of tourism destinations. Previous research have addressed the issue of value creation on tourism destinations. This study is focused on a particular type of tourism destinations, namely shadow destinations. Shadow destinations are destinations that exist in the shadow of a well-established tourism destination and is a new concept in tourism research.

**Study design/methodology/approach** - The study was designed as a case study where five shadow destinations in Sweden was selected. Data was collected through interviews with tourism companies, destination management organizations (DMO) and public actors from municipality and county administrative board. Data was also collected from secondary sources like home pages, social media and written materials.

**Findings** - The study have shown that value nets are applicable to shadow destinations. A value net is the relationships between its actors (like for example customers, buyers and suppliers as well as the competitors). Tourism destination are special since they co-create the value. Also, in many cases the tourists see the “destination” or “place” as one unit. By creating value net between the well-established destination and the shadow destination, this could benefit them both.

**Originality/value** - Studies on value net have not been applied to shadow destinations so this study should be seen as first attempt to address these issues.

**Practical implications** - The study could be useful for shadow destinations that would like to create value net. Value is co-created by the net of actors at the shadow destination.

**Keywords** - value net, value creation, tourism destination, shadow destination, case study

## **Institutions and actors' interactions in the new normal era**

*Sebastiani Roberta, Anzivino Alessia*

**Purpose** – Institutional perspective considers markets as socio-material systems (Nenonen et al., 2014) generated by processes of legitimation, in which laws, norms, routines, common habits, worldviews and routines influence relations and interactions between individual and collective actors (Kaartemo et al., 2020; Kjelleberg and Olson, 2017).

The institutional lens helps to understand how the institutional works by an actor encounter the ones by another actor: different institutional arrangements influence actors' interactions and value co-creation acting as sources and opportunities for new occasions of resourceness (Koskela-Huotari and Vargo, 2016). New resources are generated on the basis of the existing ones through interactive and integrational processes and are enabled by the complex, contextual and becoming institutional context implied by the service ecosystem (Koskela-Huotari and Vargo, 2016; Vargo et al., 2015; Vargo and Lusch, 2011).

Given these premises, this paper aims to investigate the combinatorial processes of resource integration and institutional work mechanisms that private, public and non-profit actors employ in market shaping in a transformative perspective, during COVID-19 pandemic and in "new normal" era.

**Design/Methodology/approach** – The study adopts a qualitative methodology based on 2 case studies as the aim of the paper is to understand actors' efforts in the institutional context in which they interact and integrate resources in shaping markets. The two case studies were designed around 22 in depth interviews; the collected data were triangulated with those derived from participatory observations and the analysis of secondary data.

**Findings** – The study suggests the need for a multidisciplinary and multisector perspectives on considering the process of resources interactions and integration in value co-creation and marketing shaping and formation in a transformative perspective during and after the COVID-19 pandemic. In such particular situation resource interaction and integration is strictly connected to the institutional context in which it develops, and the efforts of the different actors usually results in new institutional and critical arrangements.

**Implications** – This work advances the extant knowledge on market-shaping literature considering the proactivity of different actors and how they create new resourceness. Moreover, the paper focuses on the proactive institutional work of public and non-profit actors. Findings show the most important institutional work mechanisms that private, public and non-profit actors can use to shape markets in this pandemic period and during the "new normal" period and the difficulties they have faced.

**Originality/value** – This research contributes with reflections and suggestions on the role of private, public and non-profit actors in market shaping and formation. In the meeting between institutional works conducted by different actors there are opportunities for the creation of new potential resources that could be integrated to co-create value (Vargo and Lusch, 2011) but also difficulties to overcome. Furthermore, we provide new vision and insights on how different institutional arrangements could be seen as opportunities for change and new occurrences for resourceness (Koskela-Huotari and Vargo, 2016).

**Key words** – resourceness, institutional work, market shaping, public actors, non-profit actors.

**Paper type** – Research paper

## **Investigation on Structure of Service Ecosystem: Japanese Enthusiasts studies from Serviceology**

*Shoji Masato, Taguchi Takachi*

**Purpose** - Research on service ecosystems has been conducted to clarify the relationship between service exchanges and markets. Under the narrative of service-dominant logic, the relationship between various concepts has been well-studied. However, the scope of service ecosystems has not been sufficiently examined. The service ecosystem is an important concept that indicates the framework of service exchange, and although the macroscopic perspective of institutional work and institutional arrangements has been examined, there has been no sufficient consideration of what factors influence the scope of service exchange. Therefore, this study focuses on exchanges by enthusiastic fans, or maniacs, and examines how the scope of the service ecosystem is defined by their service exchanges.

**Design/Methodology/Approach** - This study analyzes service exchange based on a qualitative study of the Japanese enthusiast's market. In order to increase their own survival value, maniacs conduct service exchanges with fellow maniacs to provide knowledge and skills. Therefore, qualitative research will reveal how enthusiasts try to provide services and what factors influence their exchange.

**Findings** - To expand service exchange, the role of institutions in building ties between actors is important. Mania determines the scope of the exchange through the institutional framework that went with the event. On the other hand, the existence of actors who prefer a narrower scope reveals that the scope of the service ecosystem is met.

**Originality/Value** - By addressing the structure and scope of service ecosystems, this study clarifies the relationship between service ecosystems and actors. In other words, the relationships between actors influence the service ecosystem. In this way, the macro-micro relationship of the service ecosystem is clarified. Furthermore, the value of this study is to clarify the expansion of the service ecosystem.

**Keywords (max 5)** - Service ecosystem, enthusiast as actor, service exchange

**Paper type** - Research paper

## Co-Creation: The More We Contribute – The More We Value

*Shulga Lenna, Busser James A.*

**Purpose** - In goods-dominant logic, value, as a positive comparison of benefits over costs, led to a widespread understanding that consumers are mainly concerned with spending as little as possible and receiving as much as possible in added benefits from purchases (Zeithaml, 1988; Sweeney & Soutar, 2001). Yet, according to Service-Dominant Logic (SD-Logic), when social-economic actors contribute and integrate their resources, the co-created value, as a service outcome, should emerge improving the service system's well-being, understood not only as macro-level eco-systems well-being, but also as well-being for all actors involved (Vargo & Lusch, 2016; Vargo et al., 2017). Thus, this study's purpose is to examine whether when co-creation participants contribute more resources to the process they value the outcomes more.

**Study design/methodology/approach** - A two-study experimental scenario-based design was utilized. Study 1 ( $n=460$ ) used a co-creation contest managed by a popular US-based coffee-brand. Participants were equally and randomly assigned as active contributors or simple observers (manipulation:  $M_{contributors}=5.68$ ,  $M_{observers}=4.73$ ,  $t=3.20$ ,  $p<0.001$ ). Study 2 ( $n=960$ ) used a destination resort setting, where participants co-created their resort-stay. Participants, active resource integrators, were equally and randomly assigned to strong or weak resource contribution conditions (manipulation:  $M_{strong}=8.51$ ,  $M_{weak}=4.49$ ,  $t=11.72$ ,  $p<0.001$ ).

**Findings** - In Study 1, ANOVA demonstrated that contributors appraised resource integration significantly higher than observers:  $F(1, 458)=15.13$ ,  $p<0.001$ , and subjective well-being as co-creation outcome:  $F(1,458)=4.16$ ,  $p<0.05$ . In Study 2, MANOVA revealed that participants with strong contribution, appraised value and outcomes higher: co-created value  $F(1,958)=309.44$ ,  $p<0.001$ ; perceived value  $F(1,958)=318.34$ ,  $p<0.001$ , subjective well-being  $F(1,958)=267.43$ ,  $p<0.001$ .

**Originality/value** - Theoretically, the results support SD-Logic's integration of resources premise (Vargo & Lusch, 2016) and bring forward a new understanding of value. Following SD-Logic, the more co-creation actors contribute their operant resources to co-creation, the more they value the well-being outcomes.



# **Anatomy of value co-creation: case of local governments in japan for covid-19 responses**

*Siddike Md A.K., Akaishi Rei*

**Purpose** – The core of Service Science is the value co-creation through the joint and collaborative efforts among firms, customers, and other stakeholders in service ecosystems. But the previous abstraction of value co-creation does not capture multiplayer value co-creation interactions in the multilayered context of service ecosystems (Spohrer, Vargo, Casewell, and Maglio, 2008; Barile, Lusch, Reynosp, Saviano, and Spohrer, 2016). To represent the multiplayer value co-creation interaction patterns in the multilayered context of service ecosystems, we newly introduce “connectivity fingerprint”, which is the neuroscience method of neatly characterizing the connectivity patterns of complex interactions in the brains, to visualize multiplayer value co-creation process.

**Design/Methodology/approach** – We conducted interviews of 27 prefectures for their policy decision making in the COVID-19 pandemic. We developed value co-creation connectivity fingerprint based on the cooccurrences of the specific connections between the prefectural governments and other stakeholder organizations in the interview transcripts. These connectivity fingerprints of value co-creation of prefectures represent the unique patterns of the integration of resources from different stakeholders for the service recipients for different prefectures, which have diverse culture and organizational histories.

**Findings** – Value co-creation connectivity fingerprint was applied in the case of Covid-19 situations in Japan, to visualize how local governments interact with public health experts, economic experts, doctors, business practitioners, and information media (traditional and social media) to serve the citizens. Connectivity fingerprint shows how an organization functions through interactions with diverse actors beyond dyadic context. It also represents how the diverse stakeholders share information and communicate with service providers to serve the service receivers in the service ecosystem in the multilayered context. Finally, it quantifies the strength of the relationships between the prefectural governments and different types of stakeholders and value co-creation interactions in the multilayered context of service ecosystems, which include stakeholder at different levels of ecosystem such as central government (upper level) and individual citizens and business practitioners (lower levels).

**Originality/value** – This paper advances the idea of “Neuro Service Science” as a new stream of research in Service Science, which burrows the concepts and methods from neuroscience, which has historically dealt with the complex network systems, to describe and understand the similarly complex network systems existing in the ecosystems of service science. For the first step of this endeavor, we are developing both a descriptive and theoretical method of connectivity fingerprint which visualized and mapped multiplayer value co-creation interactions beyond dyadic context of service ecosystems. Practically, connectivity fingerprint could be applied for organizational and societal wellbeing through the integration of internal, external, and societal contexts and situations to innovate new products and services which can lead to sustainable organization and society.

**Key words** - Connectivity Fingerprint, Neuro Service Science, Service Science, Value Co-Creation

**Paper type** – Research paper

## **Role of informal institution in bop economy: a service-dominant logic view**

*Siddike Md A.K., Hidaka Kazuyoshi*

**Purpose** – Institution is the most recent evolution and expansion of service-dominant (S-D) logic. In general, institution controls and coordinates the value cocreation and service exchange in service ecosystems. Institutions are humanly devised rules, norms, and beliefs. It can be formal codified laws and informal social norms and beliefs (Vargo and Lusch, 2016). Formal institutions work well when the actors are able to maintain and follow the codified rules and regulations. But in the case where formal institutions are difficult to be well organized and penetrated into whole scope of the society, informal institutions have the significant role of controlling and coordinating the behavior of the actors, especially users, in service ecosystem. This paper aims to provide the foundations to understand the role of informal institutions in service ecosystem by establishing the theoretical framework through categorizing the informal institutions that guide and govern the value cocreation interactions and behaviors of service receivers in the BOP economy.

**Design/Methodology/approach** – Establishing the theoretical framework through categorizing the informal institutions based on literature review from different disciplines, including sociology, economics, political science, entrepreneurship, service science, and S-D logic.

**Findings** – Institutions play the most important roles in controlling and coordinating value-creation interactions and service exchange in service ecosystems. At the bottom of the pyramid (BOP) economy, actors cannot maintain formal institutions (contracts or collaterals) for their economic activities due to risk and uncertainties in the BOP economy. Therefore, formal institutions do not work well to reduce the uncertainties and risks in the BOP economy. As a result, we found informal institutions increase the acceptance of risks and uncertainties in economic activities in the BOP economy. We classified four informal institutions—relationships, solidarity, trust, and social norms—which guide the value cocreation interactions at the BOP economy. First of all, relationships are established by forming individual, group, and community level bonding between the service providers and service receivers. Secondly, solidarity is established in the community developed within the service receivers and providers in the BOP service ecosystem by combined interests, actions, and group discussion. Thirdly, networks and solidarity create trust in the BOP service ecosystems. Fourthly, social norms are established in the BOP economy, including timely repayment, frequent meetings, awareness, and proper loan utilization. Finally, we extensively showed the micro, meso, and macro structure of service ecosystems in which networks, solidarity, trust, and norms as informal institutions control and coordinate the value-creation interactions at the BOP economy.

**Originality/value** – As the first step of our research, we classified four types of informal institutions: relationships, solidarity, trust, and social norms control at BOP service ecosystems to increase the acceptance of risks and uncertainties. Informal institutions control and coordinate the value cocreation interactions at different levels of service ecosystems which are very original to the service research community.

**Keywords** – Informal Institution, Financial Service, Service-Dominant (S-D) Logic, Service Ecosystem, Trust

**Paper type** – Conceptual paper

# Conceptualizing Actor Engagement Management

*Storbacka Kaj, Jaakkola Elina, Nenonen Suvi, Alexander Matthew*

**Purpose** - Despite the rapid increase of research on engagement, important knowledge gaps pertain to firms' possibilities to influence or manage engagement, especially regarding stakeholders beyond customers. The purpose of this paper is to delineate the concept of actor engagement management (AEM) and to use this conceptual framework to identify contextual contingencies for AEM. Drawing on Jaakkola and Alexander (2014), Harmeling et al. (2017) and Brodie et al. (2019), we define actor engagement as a dynamic and iterative process that reflects actors' dispositions to invest resources, going beyond financial patronage, in their interactions with other relevant actors in the ecosystem.

**Study methodology/approach** - Our research approach was designed to overcome two main challenges in the current literature: the fragmentation of the engagement research and the lack of research addressing how actor engagement can be managed. We conducted a conceptual theory synthesis (Jaakkola 2020) aimed at achieving conceptual integration across multiple theories or literature streams and offer a new or enhanced view of the phenomenon. This was done by linking extant research on customer and/or actor engagement with insights from various customer relationship marketing and management, stakeholder, and network management research streams, using resource-based theory as our theoretical framing.

**Findings** - We conceptualize AEM as the purposeful activities/process of stimulating actors to contribute resources towards a specific goal. In our conceptual framework, we focus on setting AE goals, designing the AE process, and stimulating and responding to AE. The developed conceptualization i) applies to diverse actors, ii) provides insight on the nature of AEM activities, and iii) outlines contextual contingencies that influence which activities are relevant and suitable.

**Practical implications** - For managers, this study provides an actionable set of activities suitable for driving innovation. Any initial idea is not endowed with autonomous power and only moves if it interests other actors. Hence, the fate of innovation lies in the hands of a set of active actors that may react to newness in different ways. AEM is a central set of activities that support the success of systemic innovation, including market innovation, by influencing key actors.

**Originality/value** - Extant research exploring firms' possibilities to influence engagement is currently restricted to a firm's marketing function (Harmeling et al. 2017). This research is the first to define how engagement by versatile actors can be managed in different market situations. Compared to stakeholder management that is predominantly a unidirectional activity, AEM offers a more dynamic approach accommodating the multi-directional, network aspects of engagement.

**Key words** - Actor engagement, market innovation, systemic innovation.

## **Institutional Work on Platform Business Models**

*Taillard Marie, Schau Hope*

Many companies have developed platform business models that invite collaboration between and among different ecosystem actors in the process of creating and capturing value (Akaka et al. 2012). These platforms (Van Alstyne et al. 2016) operate business models that challenge the traditional boundaries between customers and brands of so-called pipeline businesses (Kortmann and Piller 2016). At the heart of these platforms are different, but deeply ingrained logics of how value is created and captured, and what resources are being integrated and exchanged and how. These logics, when brought together, exhibit the kinds of paradoxes and tensions that often result from heterogeneity in the way people think and act (Kraatz and Block 2008; Ocasio and Radoynovska 2016; Laasch 2017). Companies tend to operate from a market logic in which actors create economic value by designing products and bringing them to market on behalf of a brand. Conversely, brand fans are inclined to enact a community logic in which value is created through social interactions taking place around the brand. Actors who engage on these platforms are confronted with inherent paradoxes between these logics and seek to make sense of them.

We argue that the viability of platforms such as the one we scrutinize depends on actors reconciling clashing logics by performing institutional work -- maintaining and disrupting existing logics and creating new ones (Lawrence and Suddaby 2006). The literature on platforms has yet to address tensions that result from the interplay of actors' diverse institutional logics, nor does it address work performed by such actors in confronting and resolving these paradoxes. We address these gaps. Our research questions are (1) How do platform actors enacting different institutional logics support enduring collaboration by performing institutional work (maintaining, disrupting, and creating logics)? (2) What is the institutional outcome of institutional work performed? (3) What can managers do to facilitate the reconciliation of different institutional logics in order to ensure viability? Understanding these tensions and the work entailed in resolving them is important for managing increasingly diverse collaborations with partners who enact different institutional logics.

We examine the Lego Ideas platform on which Lego encourages fans to design and share new Lego models, with a chance for a select few models to be produced and sold under the Lego brand. Fans embody a community logic in line with the active communities which they have developed and contribute to (Schau et al. 2009), while Lego employees who manage the platform embody the traditional corporate institution and its market logic. These differences are reflected in the purpose of the actors' participation in the platform, the nature of resources that are integrated and exchanged, and the asserted governance of the platform. The platform provides an unequalled repository of rich data that captures the participating actors' practices, thereby offering a clear window into the underlying institutional logics at play. Access to the wealth of dialogue on the platform enables us to be first-hand witnesses of the institutional work they perform (Gergen et al. 2004; Lawrence and Suddaby 2006) and identify the specific micropractices that constitute institutional work by both sets of actors. We pay close attention to the practices of resource integration and how fans and Lego employees maintain and disrupt their existing logics and fashion a new emerging logic.

## **The evolution of the Circular Economy applied to Food Loss and Waste issue: the Spiral Economy 4.0 perspective**

*Testa Mario, Santini Cristina, Caraher Martin*

New paradigms are emerging in relation to the social dimension of sustainability and the win-win solutions linked to the current problem of Food Loss and Waste (FLW) can strengthen particularly effective and efficient promising business models. To support this business world transition, a profound commitment in order to develop disruptive Circular Economy models is needed, concerning products and services, relationships and accurate information flows. The paper focuses on the topic of FLW that progressively increased with the rising of economic inequalities among different countries and within the population of a single region. The reduction of FLW represents a winning strategy, as it allows to reduce the environmental effects both upstream, in the agricultural and marketing phase, and downstream, for their disposal, minimizing the negative effects on climate, biodiversity, soils, water, enhances the efficiency of the food system, develops food security and nutrition, and creates value. Companies are facing problems ranging from sustainability issues to reorganization of production, from effective network to value distribution. Furthermore, the rising of smart agriculture new digital technologies and a renewed focus on relationships are reshaping how companies are taking innovation into account. The article proposes the Spiral Economy approach, as an evolution of the Circular Economy. This model, applied to the FLW issues, intends to highlight the possibility of economic and social dynamics with a sum greater than zero.

# The T-shaped professionals' education strategies for service innovation

*Tossavainen Päivi*

**Purpose** - Scholars (Patricio et al., 2018) noticed the development of an interdisciplinary field of T-shaped researchers and practitioners. Parallel to single discipline education, inter- and multidisciplinary competence approaches have arisen. A prominent view on a contemporary competence is identified as T-shaped professional (Hansen and Oetigner 2001, IfM and IBM 2008, Brown 2009, Spohrer et al. 2010). The purpose of this paper is to advance understanding on the strategies of T-shaped professionals' education for service innovation from a higher education institute's (HEI's) perspective. There is no dispute of the usefulness of T-shaped professionalism (Barile et al., 2012; Barile et al., 2014). Moreover, the T-shaped professional framework identifies generic areas for competences (Demirkan & Spohrer, 2015). Yet, little evidence is available on how T-shaped professionals are educated. The aim of the paper is to introduce and capitalize on the T-shaped professional framework in the interdisciplinary curriculum development. Work ecosystems and workforce are constantly transforming as they pursue innovating service and co-creating value with customers. The understanding of the perspective of Service-Dominant Logic and its implications necessitates understanding the complexities of resource-integrating actors originating from multiple organizations with various competences that are involved in value co-creation. Despite the ever-increasing research on service innovation, little is researched the related education (Djellal and Gallouj 2018). HEIs provide the conditions for educating competences. Yet, the advancement of the contemporary competences in curricula remains inadequate (Ferruzca et. al. 2017).

**Design/Methodology/approach** - The qualitative case study explores strategies to develop curriculum for a T-shaped professionalism. An analytical tool is developed within the study, which draws upon three postgraduate programs in service innovation and design.

**Findings** - We found that there is 1) value for an analytical tool to assess curriculum evolution, 2) identified three dimensions for the analysis, and 3) suggested three descriptive strategies - Experimentation strategy, Applied strategy and Mimetic strategy - for HEIs to consider in the pursuit of T-shaped professional education. The results show that curriculums investigated have a different profile and purpose, and the strategies respond well to this.

**Originality/value** - The contribution of this study is to strive the education of T-shaped professionals for service economy, service business, and service innovation with the contemporary competence needed by future experts, supervisors, and managers. The study promotes and offers valuable information on strategies to develop curricula.

**Research limitations** - The obvious limitation is the single case HEI and three case curricula. As HEIs are slowly on grasping the ideas of interdisciplinary curriculum, there is limited number of curricula to provide a more comprehensive analysis and comparison of strategies chosen.

**Practical implications** - The case curricula journeys show three coherent but different value propositions for T-shaped professional curriculum responding to the domain fundamentals and disciplinary-specific knowledge required in working life. This paper is focused on developing higher education and specifically strategies to use in designing curricula for future T-shaped professionals.

**Key words** - T-shaped professional; competence; strategies; higher education

# Curriculum as a value proposition to support the transitioning of business and society

*Tossavainen Päivi, Kaartti Virpi*

**Purpose** - There is an undisputable progress of service dominant logic (SDL) approach as the main managerial challenge in leading organizations in ever-increasing complexities of societies. This raises the question, where the professionals learn the impacts on SDL, construct deeper understanding on service lens required in today's service business, and acquire relevant competences. Higher education insititutes (HEIs) have responded inadequately to service society's competence needs and educational challenges (Ferruzca et. al. 2017; Gallouj & Djellal 2019). The aim of this paper is to highlight the need for a holistic framework of reference for curriculum design in higher education and to justify, why adopting a systemic approach is adequate at both theoretical and practical level. The advances in research on service innovation and SDL provide an understanding of value co-creation and the role of value proposition as the main communication tool to explain the service offering. In this study, we expand the discussion beyond the business to the context of higher education. We first define HEIs as service providers. As such, the context of HEI can be described as a human-centric service system, in which the dynamic configurations of resources are interconnected by curriculum. Moreover, HEIs consist of resource integrators and can provide a platform for extended value cocreation with the working life and society. Second, we consider a curriculum as a value proposition of an HEI. We investigated experiments in curriculum design that have led to advanced solutions. One of which we include in this paper, is the nature and the role of teaching faculty as resource integrators forming a complex adaptive system that practice self-organizing modes of operation.

**Design/Methodology/approach** - This paper examines the curriculum as the value proposition of an HEI, and describes experiments in curriculum designs. To explore and better understand the underlying dynamics of the curriculum, a longitudinal examination of the three cases is conducted. This case study explores the transitions to interdisciplinary of business and design disciplines into the master's program curricula.

**Findings** - As a result, this paper proposes a holistic framework for interdisciplinary curriculum as a value proposition in master's programs. The conceptual framework enhances the understanding of the dimensions that influence the service offering of a HEI. Curriculum design must respond to the domain fundamentals and educated disciplinary specific knowledge and skills. This is a special challenge of the interdisciplinary programs related to service business, in which two disciplines are integrated in education. Fostering the future of the workforce and its development, HEIs need to adapt to the fast-changing world and its requirements in keeping with academic rigor.

**Originality/value** - Research on service innovation driven transitioning of business and society thru higher education is scarce. To our knowledge, this is the first attempt to describe the curriculum with the value proposition concept or identifying holistically the relational context of various perspectives in curriculum design. The conceptual model for the curriculum value proposition in the higher education is drawn from rigorous work, experimenting diverse solutions, studies, and learnings from the multifaceted data analysis. By focusing on the relationships between the framework dimensions and elements, the paper provides valuable new knowledge.

**Research limitations** - The limitations of the study are obvious: we studied a single HEI and three case curricula designs. There is a limited number of curricula or HEIs to provide a more comprehensive analysis and comparison of strategies chosen.

**Practical implications** - New professions are outlined and hybrid competences necessitate both interdisciplinary and flexibility from the curricula. In this study, we demonstrate that higher education programs that enclose interdisciplinary and thematically concurring approaches of thoughts, advocate the competences the future leaders and practitioners need.

**Key words** – curriculum, value proposition, higher education, service dominant logic

# **Ecosystem Wellbeing and Resilience: Lessons From Crisis Management in Service Organizations**

*Toufaily Elissar*

**Purpose** - In this paper, we investigate, from a S-D logic, the strategies and approaches adopted by service organizations to navigate the storm of Covid-19 crisis and the lessons learnt from the crisis to avoid and face a future one. Understanding the effect of a crisis triggered by health pandemic hazards on services delivery and management, organizational strategies for survival and recovery, and the recovery post-crisis, in terms of building organizational resilience and flexibility, is the focus of this paper.

**Design/methodology/approach** - Using a qualitative research design which closely approximates the theory-in-use (TIU) approach (Zeithaml et al., 2020), we interview 47 elite informants from service organizations that were particularly severely impacted by the crisis. We followed Corbin and Strauss's (2014) procedure for analysis of the interviews (i.e., open, axial and selective coding).

**Findings** - Drawing on transformational service research and dynamic capabilities perspective, we develop an empirical framework of crisis management which focuses on dynamic co-creation of service ecosystem well-being and resilience. Service organization responses included 1) retrenchment and balancing supply and demand, 2) service re-design and provision, 3) imposed service innovations, 4) digital servitization and 5) rethinking business models. Aiding with the process of crisis management in the face of uncertainty are dynamic capabilities, including strategic flexibility, market orientation, customer centricity, entrepreneurial leadership, and technological / digital capabilities.

**Originality/value/contribution** - The study provides a novel applied framework which sheds light on how organizations fundamentally transform their services to fulfill human and ecosystem actors' needs, by placing well-being right at the centre of their crisis management strategies. In this study, we combine the Transformative Service Research (TSR) lens on service ecosystem well-being and resilience with the dynamic capabilities perspective to explore how service organizations managed the Covid-19 crisis and what lessons can be learnt to face a future one. We argue that subjective well-being and resilience are dependent on a service co-creation process that involves multiple ecosystem stakeholders at the individual, organizational, community and societal levels. We have built on Chen et al.'s (2020) and Finsterwalder and Kuppelwieser (2020)'s work to extend the resources-challenges equilibrium to the entire service ecosystem well-being. The process of value co-creation, through the responses identified in our paper (e.g., digital servitization and imposed innovations), were adopted to provide physical, health, financial and social safety to the service ecosystem actors (primarily customers, employees, and managers) in times of the pandemic.

**Practical Implications** - The findings contribute to the service marketing practice by identifying the managerial strategies that blend Theory-in use approach, Transformative service research and a set of dynamic capabilities. The study provides a novel applied framework which sheds light on how organizations fundamentally transform their services to fulfill human and ecosystem actors' needs, by placing well-being right at the centre of their crisis management strategies. Well-being became a function of fulfilling the most basic human needs (belonging, safety, security and hygiene) of customers, employees, managers and communities. Our research helps managers and decision-makers to identify the right strategies and capabilities needed to manage the crisis. Critically, managers should stress building the skills of market orientation, digitalization and strategic flexibility to manage uncertainty. Services organizations require flexible and integrative decision-makers who elevate service innovation to a *core strategic issue* to come out of this crisis.

**Keywords** - Covid-19, Pandemic, Crisis management, Transformative Service Research, dynamic capabilities, resilience, well-being, service ecosystem, service digitization, service innovations



**The role of smart technology in shaping value co-creation routines.  
A study of service ecosystem change**

*Tuominen Tiina, Mele Cristina, Edvardsson Bo, Reynoso Javier*

**Purpose** - This paper aims to extend current models of ecosystem transformation. A theory of routine dynamics is used to explain the interconnections between changes in different elements and at different levels of a service ecosystem. This theoretical lens is then applied to specify the role that smart technology plays in triggering change in the performative and emotional aspects of resource integration and value co-creation.

**Method** - The study builds on earlier conceptualizations of service ecosystem change, technology-enabled change, and routine dynamics to propose a new, integrated framework. A qualitative case study approach is applied to empirically study service ecosystem change in elderly care case, where workshops and in-depth interviews with different actors involved were conducted to explore the adoption of new, smart technology and to learn about the process and outcome of the changes.

**Findings** - We show the usefulness of new, smart technology, when enacted as a resource-in-use in two micro-level routines. The analysis zooms in on how value co-creation is transformed, in not only the two routines with implications for their immediate participants but also in the other, interconnected routines in the broader service ecosystem. In this case, smart technology enabled transformative service ecosystem change, in particular with regard to the performative and emotional aspects of value co-creation.

**Implications** - The study demonstrates how technology shapes resource integration and value co-creation. As an enabling resource, it can form a core change mechanism, triggering multiple changes in different resource integrating and value co-creating routines in service ecosystems.

**Value** - The paper contributes to current calls for analyses of how a service ecosystem adjusts and transforms due to changes in its lower-level properties and configurations (Akaka et al., 2013; Frow et al., 2016; Vargo, Koskela-Huotari, et al., 2017; Carida et al., 2018; Skyler et al., 2019). Using the theory of routine dynamics, it offers a way to address interconnections between such properties and configurations in changing service ecosystem.

## **Transformative Service Research: a systematic literature review**

*Ungaro Veronica, Di Pietro Laura, Renzi Maria F., Guglielmetti Mugion Roberta, Pasca Maria G.*

**Purpose** – The present study aims to investigate what has been gathered under the Transformative Service Research (TSR) umbrella in the last years, analysing the articles published so far. Services dominate the economies of the most advanced nations, and consumers interact with various service providers every day (e.g., financial, healthcare, restaurant, retailer). Hence, services influence our economic and social world, and questions arose about their impacts on human beings' quality of life and well-being. The new research field, named TSR, studies the relationship between services and well-being. "Improving well-being through transformative service" was identified as a research priority by Ostrom et al. in 2010, it was designated as the most important priority in 2015 (Ostrom et al.), and over the years, there has been increasing interest in this topic between the research community.

**Design/Methodology/approach** – A systematic literature review method is applied to address the study objective; specifically, the research adopts a systematic quantitative approach (Pickering & Byrne, 2014; Pickering et al., 2015). The keyword "Transformative Service Research" was input in two research databases Scopus and Web of Science, and 155 articles published between 2011 and 2020 were analysed.

**Findings** – The authors summarised each paper's bibliometric characteristics, then they detected the major investigated themes in TSR and classified the analysed articles. The principal contexts in which the TSR was applied were identified; specifically, the authors found that healthcare is the largest investigated sector. Then based on the authors' country of origin, the areas of the world where there is more interest in the TSR field were determined. Moreover, the authors observed that there are not only conceptual studies but also a strong contribution of empirical research, concluding that this new research stream has not remained on a purely conceptual plane but efforts were made to put practical projects in place. Finally, the authors analysed the contribution of each paper to TSR and the research gaps.

**Practical implications (if applicable)** – It has emerged from the present research that not only the service providers have a role in contributing to improve well-being but also the policymakers that have the power to issue regulations and the researchers who have the task to continue to develop studies that investigate the relationship between well-being and services to grow this new and complex field.

**Originality/value** – The current paper is the first to perform a systematic quantitative literature review on TSR, identifying the major themes and synthesising the principal articles' characteristics.

**Key words** (max 5) – transformative service research; systematic literature review; well-being; service system; transformative service

**Paper type** – Literature review

# Ready to Pair? Understanding Pre-negotiation Supplier Engagement in the Context of Performance-Based Contracting

*van Strien Jeroen, Sahhar Yasin, van Fenema Paul C.*

**Purpose** – Performance-Based Contracting (PBC) increasingly finds its way in Service-Dominant Logic (SDL) theory and practice because of a shared focus on the beneficiary's value creation and reciprocal value propositions that comprise goods, services, information, and customer-firm interactions. As a midrange theory domain, PBC operationalizes SDL by elaborating SDL microfoundations. Novel types of customer-supplier exchange contracts and services, such as PBC, emphasize achievement of outcomes in complex customer settings, rather than merely exchange of products or transactional service delivery. Still, actual use of PBC is still in its infancy. For instance, tensions exist in pre-negotiation phases involving both customers in need of complex assets for their value creation processes, and Original Equipment Manufacturers (OEMs). Since PBC entails a shift of risks towards the OEM, understanding practices that influence OEMs' commitment are decisive for successful negotiation, contracting and value cocreation. Research so far tends to adopt a customer-centric view. It offers limited insights, however, in OEM-related practices inductive to negotiation. This increases ambiguity on the side of customers interested in proposing PBCs to the market. Along these lines, the purpose of this paper is to contribute to SDL-microfoundations by (1) explaining OEMs' willingness in terms of practices to enter PBCs with a reciprocal value proposition, and (2) designing a PBC service governance and management model to enable customer-OEM negotiation and anticipate contract management.

**Design/methodology/approach** – This study expands on PBC and SDL literatures, focusing on the nexus of practices driving OEM interest in pre-negotiation phases. Empirically, it is based on a case study in a complex high-tech context that is dynamic in nature and based on long-term relationships. The case offers a retrospective view on pre-contracting practices that matter to the OEM. The analytical focus lies on a maintenance agreement – presently active – between a public customer organization and an OEM (hence: business to government, B2G). The contract concerns sustainment of almost 3,000 high-tech products, used in the customer's home base as well as during international operations. The case illustrates a reciprocal value proposition as sustainment involves human resources, equipment, and facilities from both the customer and OEM. In-depth data has been collected both on the customer and the OEM side through semi-structured interviews, archival study of contracts and related documents, and informal conversations.

**Findings** – Findings are presented in a model that consists of different types of core, generative and balancing mechanisms that include individual practices, which influence the OEM's willingness to proceed with negotiations. The dominating core mechanism, prospective performing, consists of the practices enabling verifiable forecasting, monitoring, and managing performance and scoping the contract towards growth. Hybridizing activities combines different activities and act as a generative mechanism, which consists of linking the purchase and maintenance contract and safeguarding continuity in OEM workshops. Two balancing mechanisms are constructing relationships and vetting of risk management, in which the former consists of customer independence and governing in a relation manner, while the latter focuses on balancing risk and reward and transferring the risk. These mechanisms demand a careful balancing act to accommodate OEM's willingness and not restrain it. Finally, maintaining a strategic portfolio for the OEM and facilitating feasible contract duration are two additional and separate practices.

**Implications** – By underscoring the OEM's willingness in terms of practices in pre-negotiation phases, this study strengthens the theoretical foundation of the management of resources and capabilities in complex service settings as an application of SDL-thinking. We lay out constellations of practices that accommodate value cocreation in reciprocal value propositions. However, the mechanisms require careful execution to prevent a restraining effect on the OEM's willingness. Our study contributes to interorganizational service (ecosystem) literature by examining the initial phase of setting up a reciprocal B2G relationship. Moreover, the findings provide practitioners insights in the dynamics of value cocreation by specifying what it takes to build reciprocal value propositions.

**Originality/value** – This study coalesces PBC and SDL literature and highlights the importance of the underexposed pre-negotiation phases, which is done specifically in the light of reciprocal value propositions and value cocreation dynamics.

**Keywords** – Service-Dominant Logic, Performance-Based Contracting, Practices, Value Cocreation, Value Codestruction, Reciprocal Value Proposition, Pre-negotiation

**Paper type** – Research paper

## **Towards a decision support framework for service modularisation**

*Vestertė Jurga, Skačkauskienė Ilona*

**Purpose** – The theory of modular systems proves useful in its application to services. The benefits of service modularity include cost-effective differentiation to better meet customer needs, requirements, and expectations; effective management of complex service systems; resilience to disruption; and the like. However, when implementing service modularization, there is a lack of clear understanding of what should be expected as overall benefits. To address this inconsistency, this paper aims to explore the nature of context and propose a direction for a management decision support framework that ensures rationality in service modularisation decision making.

**Design/methodology/approach** – The paper is a part of an ongoing research. It uses a conceptual approach and focuses on exploring existing service management research and modular systems theory.

**Findings** – The paper presents insights for a decision support framework consisting of four interrelated and complementary domains. It also identifies problem areas related to the lack of methodological options for management decision support and offers guidelines for addressing these problems.

**Research limitations/implications** – This work is exploratory in nature and is intended to provide a possible starting point for further theoretical refinement and empirical validation.

**Practical implications** – This paper helps the management of service organisations to better understand the implications of service modularisation. It also suggests considering the use of a decision support framework to speed up the planning process and expect a more beneficial outcome.

**Originality/value** – The article contributes to the field of service modularity by providing insights into decision support for service modularisation, which has not been addressed in previous research.

**Keywords** - Modular systems theory, Service modularity, Service modularisation planning, Management decision support.

**Paper type** - Conceptual paper

## **Conceptual model of Smart Services**

### **How to understand the structure of services in Smart City**

*Walletzky Leonard, Carrubbo Luca, Buhnova Barbora, Bayarsaikhan Odonchimeg*

**Purpose** – The key problem of Smart Cities development leads in the understanding of the complexity of services structure. The paper will use Service Dominant Logic and Service Science to improve current models of Smart City Services structure to develop conceptual model of Smart City.

**Design/Methodology/approach** – The paper proposes a literature review to present the state of the art in the Smart City Services structure analysis. Building upon this, using the principles of Service Dominant Logic and Service Science, the multi-contextual conceptual model will be presented. Also, the paper will show the basic examples of its usage, including the advantages of the model.

**Findings** – The paper proposes a complex and innovative structure of Smart City Services. The main advantage of this new approach is interconnection of the services and contexts, affected by them. It will lead to better understanding of the complexity of Smart City.

**Research limitations/implications** – Even the model has been practically tested, there are several limitations of its usage, based on high variability of the Smart City environment. The development of the model needs to be discussed in service science community for getting the insights to its development.

**Practical implications** – The presented model has direct influence to the practical usage in Smart City methodology. The current status, where every country and city is using a different approach to the services structure, is based on missing of common conceptual model of Smart City. In the case of accepting this model, the sharing of knowledge and information among cities and countries would be much easier and valuable.

**Originality/value** – The paper is using current knowledge in Service Dominant Logic and Service Science to develop a new approach of understanding the Smart City Structure. This approach is unique and can be developed only thanks to continuous service research on this field. The presented model is tackling the problem of understanding the relationships among the services and help to manage them too.

**Key words** - Service Dominant Logic; Service Science; Smart Cities, Smart Services,

**Paper type** – Conceptual paper

# Avatar-mediated service encounter and its impact after COVID-19

*Watanabe Kentaro*

**Purpose** - The COVID-19 pandemic has brought a serious influence to service industries, especially manual services with direct customer interactions. Under this situation, the need for remote interaction with customers is growing. Among frontline service technologies for assisting service encounters, experimental or business applications of avatar technology have been gradually becoming popular, for example in retails and other types of service facilities in Japan. After COVID-19 became pandemic, avatar technology gains more attention as a means for rich and safe customer interactions from a remote site, which is effective under the social distancing policy. Although several researchers have already highlighted avatar technology as an effective tool for creating novel service experiences in the existing study, its impact to service encounters and the whole service businesses especially after the pandemic are still understudied. This study aims at conceptualizing avatar-mediated service encounter and examining its impacts to customers, frontline employees and overall service businesses.

**Study design/methodology/approach** - This study first overviews the impact of COVID-19 to business practice and management in various service industries. Next, the existing study on frontline service technologies in general and the recent advancement of avatar technology is investigated. Based on the result, this study conceptualizes avatar-mediated service encounter in comparison with other types of service encounters such as direct human-human interactions and self-service technologies. In addition, this study conceptually categorizes several types of avatar-mediated service encounters and their features.

**Findings** - This study clarifies advantages and disadvantages of avatar-mediated service encounter from several aspects such as hospitality and productivity. These characteristics are also discussed from the aspect of the overall service business after the COVID-19 pandemic. In addition, this study illustrates different types of avatar-mediated service encounters based on technology types (virtual / robot) and main avatar users (employee / customer) with several examples. Moreover, this study attempts to extend the existing framework on frontline service technologies by exploring how avatar-mediated service encounter could affect other types of service encounters with more automated service technologies.

**Originality/value** - This study advances the understanding on the impact of avatar technology to service encounters, taking the influence of the COVID-19 pandemic into account. The result could contribute to the recovery of service industries which are heavily damaged by the pandemic.

**Keywords** - Avatar technology; service encounter; frontline service technology; COVID-19

## **Doctoral Workshop**

## **THE 2021 NAPLES FORUM ON SERVICE – DOCTORAL WORKSHOP**

To stimulate academic scholarship, discussions of ideas and dialogue among students and researchers from different countries, in the field of service, we invited doctoral students to attend a doctoral workshop.

The workshop will be a full-day in which PhD students will have a chance to discuss their PhD projects even in groups with mentors and mentoring buddy.

The doctoral session co-chairs, Christoph F. Breidbach, Kaisa Koskela-Huotari and Debora Sarno will stimulate discussion and will attempt the deepening of some of the research dilemmas and open questions.

### **PARTICIPANTS**

Del Vacchio Erica, University of Naples “Federico II”, Italy

Title: “Blockchain: main paths to create a value service innovation”

Elo Jenny, University of Jyväskylä, Finland

Title: “Value Co-Creation in Continuous Cyber-Physical Service Innovation”

Feddema Kim, UWA Business School, The University of Western Australia

Title: "Understanding the role of online communities in wildlife trade”

Genc Tugce Ozgen, University of Strathclyde, UK

Title: “Margin To Mainstream: Using Engagement to Change Entrenched Consumption Practices around Food Waste”

Katsifaraki Georgia, University of Cyprus, Greece

Title: “A study of complex transaction phenomena related to actor’s cocreation within modern market ecosystems”

Laddaga Cesare, University of Naples “Federico II”, Italy

Title: “The impact of emerging technologies on the cultural industry”

Landry Mikèle, University of Fribourg, Switzerland

Title: “Value co-creation and customer well-being in service ecosystems”

Morande Swapnil, University of Naples, Italy

Title: “Augmenting Psychosomatic Health Using Artificial Intelligence: Wellbeing Practices in Healthcare Ecosystem”

Ranieri Angelo, University of Naples “Federico II”, Italy

Title: “Customer Experience in the age of Artificial Intelligence: challenges and opportunities in the retail business”

Ruggiero Andrea, University of Naples “Federico II”, Italy

Title: “Robotics in healthcare: The role of social and service robots in fostering well-being”



**Evert Gummesson** is Professor Emeritus of Service Marketing and Management at the Stockholm Business School, Sweden, and is its former Research Director. He is a Fellow and Honorary Doctor of Hanken School of Economics, Helsinki, Finland, and a Fellow of the University of Tampere, Finland. Evert Gummesson is an international pioneer in the fields of service, relationships with special focus on many-to-many marketing and networks and is a cofounder of the Naples Forum on Service. He currently spends his time writing books and articles and has just published a book for Sage on case study research where he introduces an upgraded version called case theory. He has received the American Marketing Association's (AMA) Award for Leadership in Services, and was the first winner of the S-D Logic Award and the Grönroos Service Research Award. The Chartered Institute of Marketing (CIM), UK, has listed him as one of the 50 most important contributors to the development of marketing.

**Cristina Mele, Ph.D.**, is a Full Professor at the Department of Economics, Management and Institutions, University of Napoli Federico II. She is the coordinator of the PhD in management program. Her main research interests include service innovation, cognitive technologies, value creation, markets, and service ecosystems. She authored about 200 publications. Her articles have appeared in leading international journals, including Journal of the Academy of Marketing Science, Marketing Theory, Journal of Business Research, Industrial Marketing Management, Journal of Service Management, Journal of Service Theory and Practice, and Managing Service Quality. Her recent books include: (1) Innovating in Practice - Perspectives and Experiences - (Springer, 2017) and (2) Practicing Innovation (ESI, 2018). She has been co-editor of numerous special issues of international journals (Marketing Theory, Journal of Marketing Management, Journal of Creating Value and others). Cristina participates in global initiatives with the Market Shaping and Innovation group (The University of Auckland Business School), the Cognitive Systems Institute Group (cognitive-science.info), and ISSIP.org (International Society of Service Innovation Professionals). She is ISSIP Ambassador.

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