BEING INNOVATIVE ABOUT SERVICE INNOVATION: SERVICE, DESIGN AND DIGITALIZATION

ICIS 2012 PANEL STATEMENT

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Abstract

Moving beyond questions about "services" and "the services economy," this panel considers fresh ways of thinking about service innovation in the era of pervasive digitization. Panelists will argue that our understanding of digital services and products is radically transformed if we consider all exchanges to be service-for-service exchanges in which customers and suppliers co-create value in exchange networks. Innovation can then be understood as the continual process of breaking down knowledge (information) and reintegrating it to create new knowledge-based resources. Pervasive digitalization and generative digital platforms are revolutionizing service exchange possibilities. Value exchanges nonetheless occur within contexts that are material and social, tangible and tacit. The dynamics of these dimensions of service exchange challenge our concepts and methods for designing for service. Representing different approaches and disciplines, panelists will share their views on how the IS field might rethink service innovation, design and digitalization.

Introduction

The 2012 ICIS conference theme "Digital Innovation in the Service Economy" reflects the shifting of the economy from a goods-based to a service-based economy and the rapid expansion of the information economy. Digital innovation is widely viewed as central in the radical transformation of the world economy from manufacturing-based to service-based approaches. Undoubtedly much of this change is enabled by – and often dependent on — information technologies (IT) facilitating new business models, collaborations and work practices in service provision. However, a variety of social, economic, technological, and political factors contribute to the diversity of services evident in today's economies, including, for example, demand for coordination services, specialization of service providers, growth in compliance-related services, service globalization, and government-provided services (Bryson et al. 2004). These forces challenge social and market institutions at all levels – societal, industry, profession, organizational, group and individual (Barrett and Davidson 2008). We suggest that upending the conference theme to consider *service innovation* in the *digital economy* can provide complementary but challenging insights to our ideas about digital innovation in the service economy.

First, the concept of "service" can be reexamined analytically and theoretically. In the past, the notions of "services" and of a "service economy" have been unchallenged, and *services* have been considered as distinctly different from products -- intangible, heterogeneous, and perishable units of output that are produced jointly by the beneficiary and producer and that are predominantly local (Gersung and Resengren 1973). These traditional views of services, particularly the differentiation between products and services, are now being questioned. For example, Gustafsson and Johnson (2003) suggests that physical products represent services to be experienced. Similarly, Vargo and Lusch (2004. P. 13) maintains, "tangible goods serve as appliances for service provision rather than ends in themselves." In the IS field, "servitization," such as software-as-a-service, recognizes not only that customers are primarily interested in the service value they can realize through software and hardware but also that service value networks may be redesigned and redistributed across customers and suppliers (Spohrer and Riecken 2006). Vargo and Lusch (2004; 2008) push these boundary-spanning conceptualizations between products and services further, arguing for a service-centered dominant logic of exchange ("S-D logic"). In their view, all exchanges are service-for-service exchanges, in which goods are service-delivery mechanisms, customers and suppliers co-create value in exchange networks, and *operant resources* such as information, knowledge, organizational routines and competencies as well as technologies, are the source of innovation and competitive advantage.

Second, pervasive digitalization made possible by information and communication technologies are revolutionizing service exchange possibilities. Citing the e-book as an example, Yoo et al. (2010, p. 725) comments that digitalization of content and embedding digital capabilities into technology artifacts such as e-book readers are rapidly transforming value networks of firms and organizations, not only reconfiguring the organizing logics of "who does what" but changing what it is possible to do. That is, the potential to co-create value for customers and providers of e-books differs dramatically from that of printed books. However, service exchange often involves many complex combinations of explicit and tacit knowledge as providers and customers attempt to collectively coordinate and integrate their knowledge. Thus, whether we talk about service, or "services" as distinct sets of economic activities, we must attend to the negotiated and co-generated nature of exchanges between networks of providers and customers, in which service-as-value is in large part intangible and enacted.

Third, digitalization is often associated with dematerializing the material (Norman 2001). Yet value exchanges among human beings nonetheless occur within contexts that are material, even if that materiality may be transformed through digitization. Moreover, contexts for exchange are social as well, governed by the immaterial but nonetheless powerful forces of social structures, norms, rules, regulations, and traditions. The social and material implications of digitalization in service-for-service exchange suggest opportunities for innovation but may also limit or alter value co-creation in unanticipated ways. In the IS field, researchers adopting the theoretical lens of sociomateriality (cf. Orlikowski 2007; Orlikowski and Scott 2008) are examining the intrinsic interplay of the material, the social, and of technologies, suggesting ways in which these implications may be theorized and examined. In this regard, *design thinking* as an approach to problem solving offers researchers and practitioners insights for innovative service opportunities (Brown, 2008). Kimbell writes, "the purpose of the designers' enquiry is

to create and develop proposals for new kinds of value relation within a socio-material world" (2011, p. 49). Design thinking highlights the exploratory and indeterminate nature of the design process (Buchanan, 1992; Boland and Collopy, 2004) and acknowledges the importance of agency, the situated nature of interactions, and the uncertainty of outcomes, which can (will) always be redefined not only during conceptualizing but also in implementation (Suchman et al. 1999; Nardi and O'Day, 1999). Design thinking thus highlights the situated nature of service and the importance of understanding the context of use and the emergent nature of design through action, and thus the realization of values for customers and providers in service-for-service exchange.

The IS field has a role in contributing to debates and developing knowledge on service innovation. The proposed panel invites well-known and experienced scholars from marketing, management and IS to a debate on the nature of *service* and of digital innovation for service. Representing different approaches and worldviews, the panelists will share their views on how the IS field could reconceptualize foundational elements and draw on new theories and concepts to develop this emerging field within IS.

Issues, Opportunities and Approaches

Our panel aims to move beyond the questions of how "services" may be distinctive from "products" and what is happening in the "services economy" to argue for fresh ways of thinking about and understanding service in the era of pervasive digitization. Our goals are to highlight new debates and controversies on service, design and digital innovation. We will question, are IS theories, concepts, and methods up to the task of bringing new and creative insights to these topics? We will argue that it does matter how we think and talk about key concepts and suggest that new concepts and new terminology are needed to be truly innovative about service innovation. We will debate ways in which we believe these questions may be addressed.

While the panelists share common ground and can therefore present their positions as a collective panel, we will articulate key differences on how each conceptualize service, innovation, design and the role of the "digital". The panel will be controversial in the sense that the panelists will challenge each other ontologically and epistemologically on key concepts and ideas and will use examples from their research to persuade the audience of their distinct perspectives. Through taking a multidisciplinary approach the panel hopes to advance the IS field's understanding of the themes central to this ICIS conference.

Each of the panelists will weave the following themes into their presentations, using examples from their body of research: (i) What key theoretical concepts that underlie an understanding of *service* can better inform our research than traditional understandings of "services"? (ii) Moving beyond a focus on the "service economy," how do we apply these concepts widely across economic and social sectors? (ii) What is the role of digitalization and digital innovation in service, when we account for such concepts? (iii) What are the approaches that can help the IS field advance knowledge on service innovation through design thinking and digitalization? Through the presentations and discussion and interaction with the audience, the panelists will integrate as well as contrast their positions.

Elizabeth Davidson will open the panel by reflecting on the IS field's interest in the Service Economy (Barrett et al. 2008) to highlight broad questions about what might be truly "new" -- theoretically and conceptually -- about service and digital innovation. Most industrial sectors (notably, those classified as "service industries") seem to be transforming rapidly with widespread diffusion of digitalization and networked IT, providing a mesmerizing array of exciting empirical phenomena for study. Are we too quick to apply the well-honed theories, concepts and methods of our field to these phenomena, without considering adequately how the spread of digital innovation into new economic sectors may not only be transformative but may also be transformed by the institutional context (Chiasson and Davidson 2005)? Conversely, are we so focused on today's technological phenomena that we fail to consider patterns of standardization, industrialization, destruction and reconstruction of institutional fields that have long been evident in human economic exchanges? These introductory comments will lay a foundation for the panelists' commentary and provide some focal questions for contributions from the audience.

Stephen L. Vargo will bring to the panel the controversial position that there is no such thing as "services," that service is not new, and there is no new "Service Economy." Instead, he will argue recent attention to the Service Economy is an aberration of a classification system built on manufacturing, coupled with increased, specialized outsourcing that is partly attributable to IT. There is no "services"

revolution; there is a *service revelation* made possible by IT developments. IT makes it possible to separate information from people and matter and thus to freely move about, what Normann (2001) calls "liquefaction." This allows infinite ways of creating new "densities," combinations of resources useful in increasing the viability of human systems — that is, in value creation. Useful knowledge is an *operant resource* in the terminology of service-dominant logic (Vargo and Lusch 2004, 2008), which moves information from a supporting role to a primary role in value creation. By not focusing on the material product in which we sometimes embed information, Stephen will argue that we reframe the whole notion of innovation. Innovation can be understood as the continual process of breaking down knowledge (information) and reintegrating it to create new knowledge-based resources that can benefit human systems. This does not render materiality unimportant; rather, it recasts it in an institutional role.

Youngjin Yoo will tackle the implications of digitalization to argue that "the material" is an essential conceptual component in service innovation. Drawing on the notion of a layered modular architecture (Yoo et al. 2010), he will argue that digitalization does bring an increasing degree of separation between form and function but that designers always attempt to negotiate with material agency, appropriating the latest scientific and engineering knowledge (Pickering 1995). Technological and scientific developments allow designers to bring new functionality to a given material by mobilizing new immaterial ideas with the same material in ways that were not possible in the past. Thus, digitalization has brought a fundamental shift in the power balance between the material and immaterial. Pervasive digitalization is decisively loosening the powerful grip of physical materiality over immaterial ideas, setting up the conditions for highly generative and dynamic evolutionary patterns of digital artifacts. Based on this analysis, Youngin will argue that although service-dominant logic is correct in pointing out that "service" has been there all the times even without digital technology (Vargo and Lusch 2004), what is unique now is that designers are deliberately creating digital artifacts that have no inherent built-in function (Zittrain 2006). Instead, these digital artifacts are there to be programmed to perform *any* function (Rushkoff 2010). Thus, a digital innovation is less concerned about the actual marriage between a specific form and a specific function, but more about building a platform that is pregnant with possibilities that can be later brought forth later (Yoo 2010). Moreover, success or failure of digital innovation is how the original idea mutates and evolves over time. Youngjin will argue that the IS community has a unique opportunity in this intellectual discourse by positioning itself as an evolutionary science of digital artifacts.

Anne-Laure Fayard will take a practice and design thinking perspective to argue for a participative and iterative view of designing for service, highlighting the central role of agency and the indeterminate and emergent nature of what is being designed (Buchanan 1992; Kimbell 2011). She will argue that it is more appropriate to talk about designing for service, which is an ongoing process, rather than service design or design of service, which produces an object (Kimbell 2011; Sangiorgi 2009; Manzini 2011). Her positions will build on Vargo's and Yoo's but she will push further along the lines of service experience and in so doing challenge the centrality of *digital innovation* in our thinking about *service innovation*. Drawing from her studies of service designers, she will argue that while digitization is rarely discussed as a stand-alone component, more often than not the digital aspect is "pre-supposed" as being part of the service experience, thus acting as a touch point or providing a structure for designing touch points. For instance, designers may talk about designing services as opposed to talking about designing websites. She will argue that IT and particularly the web have infused the way professional designers think about how interactions are connected and situated in time and place, so that the concepts of network, journey, touch points, and repeated interactions are shaping service design as a discipline, and thus shaping the future of service innovation.

Michael Barrett will argue the need to recognize the limitations of the liquefaction logic of IT in service innovation, which over emphasizes the ease of breaking down information and reintegrating it in use for service innovation in a rather 'friction-free' manner (Baumann 2002). Moreover, he will question the notion of an *evolutionary* science of digital artifacts by highlighting the importance of social shaping and purposeful human agency in how digital potentials are realized. Michael will suggest a sociomaterial approach that emphasizes *practices* inherent in digital innovations in service. This relational approach emphasizes the mutual entanglement of the material and human, with technology and information not easily separated and recombined in a functional manner. This approach argues that conceptualizing service from a sociomaterial perspective in practice necessarily challenges the view of a seamless or friction-free information-based perspective and suggests bounds on the service possibility. Using the case of 3D cinema as a digital innovation, Michael will examine the role of materiality in the practice of movie

watching. He will conclude by noting the importance of how affect (psychosocial) connects to a sociomaterial lens by considering how the practice of 3D viewing influences the service experience.

Panelists biographies

Michael Barrett is Professor of Information Systems & Innovation Studies at Judge Business School, University of Cambridge. He is a member of the Steering Board of the Cambridge Service Alliance and a member of the Management Executive Group of the Collaborations for Leadership in Applied Health Research and Care (CLAHRC) at Cambridge University. His research examines the adoption and diffusion of IT-related innovations and their transformation of services in financial markets and health care. Barrett focuses on sociomaterial and practice-based conceptualizations to service and service innovation. In 2008 he served as program co-chair for the IFIP 8.2 conference on *Information Technology in the Service Economy: Challenges and Possibilities for the 21st Century* and is serving as co-guest editor for a special issue of *MIS Quarterly* on *Service Innovation in the Digital Age*.

Elizabeth Davidson is the W. Ruel Johnson Professor of Information Technology Management at the Shidler College of Business, University of Hawaii. Her research has addressed organizational and field-level changes with IT implementation in healthcare and the tensions between IT-enabled innovation and institutional inertia in this sector. In recent work she has examined the emergence of new discourse actors in digital media channels and explored the implications of digitalization for entrepreneurship. In 2008 she served as program co-chair for the IFIP 8.2 conference *on Information Technology in the Service Economy: Challenges and Possibilities for the 21st Century* and is serving as co-guest editor for a special issue of *MIS Quarterly* on *Service Innovation in the Digital Age*.

Anne-Laure Fayard is an Assistant Professor of Management at the Polytechnic Institute of New York University. Prior to joining NYU-Poly, she was a faculty member at INSEAD in Singapore and in Fontainebleau and has been a Visiting Scholar with Design London and the Innovation and Entrepreneurship Group with Imperial College Business School (Paris) and with the Center of Sociology of Innovation at Ecole des Mines (Paris). Her research interests involve organizational communication, sociomaterial practices, space, art and design as research methods and cross-disciplinary collaboration. Her work has been published in several leading journals such as *Harvard Business Review*, *Organization Studies*, the *Journal of Computer-Mediated Communication*, and *Information System Journal*.

Stephen L. Vargo is a Shidler Distinguished Professor of Marketing at the University of Hawai'i at Manoa. He is renowned for his work on the service dominant logic, which has been widely recognized for its contributions to the field of marketing and has gained significant interest in the IS field. He has published articles in the *Journal of Marketing*, the *Journal of the Academy of Marketing Science*, the *Journal of Service Research*, and other major marketing journals and has been awarded the *Harold H. Maynard Award* and the AMA/*Sheth Foundation Award* for his contributions to the field of marketing. He is guest co-editor of a special issue of *MIS Quarterly* on *Service Innovation in the Digital Age*.

Youngjin Yoo is the Director of the Center for Design+Innovation at Temple University, where he is Professor in Management Information Systems and Strategy, and Irwin L. Gross Research Fellow at the Fox School of Business and Management at Temple University. His research interests include digital innovation, design, experiential computing and organizational genetics. He is program co-chair of AMCIS 2012 and 2013 program-chair for the Organizational Communications and Information Systems (OCIS) division of Academy of Management. He is a guest co-editor of a special issue of *Organization Science* on *Organizing for Innovation in the Digitized World*.

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