Customer-Centric Service Design: Featuring Service Use in Life Practices

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Abstract. Today digital technologies have become pervasive in human life and shape the everyday life practices of the people. The paper investigates how service design can be used to understand the way that people use services in their everyday life practices and to improve the service value for the people. The purpose of the paper is to advocate the development of a new, customer-centric perspective in service design that is based on the requirements of the user and the use of services in the everyday life practices. The paper discusses the meaning of service design for the customer/user and suggest an alternative approach that emphasizes on design as planning for service use and integrating services in the everyday practices. A holistic service architecture that connects service provision, delivery and use provides insights for the way that services are embedded in the everyday activities and the development of applications and tools that can support the planning of service use and the integration of services in the everyday life practices.

Keywords: Service design · Service architecture · Service integration · Customer-centric · Life practices · Society 5.0

1 Introduction

The rapid evolution of digital technologies has brought drastic changes in every aspect of the business operations and the people's life practices. A variety of new technologies, such as mobile technologies, the Internet of Things (IoT), wearables, artificial intelligence (AI) and machine learning, Big Data, the Cloud, automation and robotics, virtual and augmented reality (VR/AR), stimulate the development cutting-edge innovations that guide the digital transformation of the economy and the society. The continuous progress of digital technologies is accelerating the development of a paradigmatic shift from a product-oriented business logic into a service-oriented logic, according to which service is understood as a perspective of business, rather than a different type of goods [1]. In parallel, the digital technologies boost the development and delivery of online and mobile services and foster service innovation [2], especially with the development

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of information-intensive services and 'smart services' that are adjusted to contextual parameters [3].

The new technologies promise the development of a smarter, service-based world that will provide opportunities for increased value creation for the people. For instance, 'Smarter Planet' was an initiative of IBM for the development of smarter systems that can achieve sustainable development and societal progress [4]. More recently, the Japanese government introduced 'Society 5.0' as an umbrella initiative for the development of a human-centered information society, as a 'super-smart society' that employs digital technologies for the provision of smart services, so that "people enjoy life to the fullest" [5]. In this realm, transformative service research has been introduced as a research movement that is based on the assumption that service systems have great impact on the way that people live their lives and the quality of life they enjoy and, hence, service research can be used to improve the well-being of individuals and the society [6]. Kristensson [7] suggests the discussion for future service technologies should not focus on the technologies themselves, but on the benefits and the value they create for the user. Likewise, Brenner et al. [8] discuss the importance of the concepts of 'user, usage and utility' in service research.

Today digital technologies have become pervasive in human life and shape the everyday life practices of the people [9]. This brings major changes in the way people use services in their everyday life activities in order to achieve their goals and develop experiences and value. This paper responds to the many calls in the literature for the development of customer-centric approaches in service research that take into account the way that services are embedded and used in people's lifeworld in order to create meaning and value for the people [5, 6, 8, 10–12]. Even though there is a vivid dialog in the service design literature about the embeddedness of services in people's lifeworld, most of the current approaches emphasize on the design of the service, the service system or even the service ecosystem, but they do not extend sufficiently their scope to analyze the use of services in the people's lifeworld.

The paper makes several contributions to the existing service design research. First, it introduces a customer-centric perspective in service design that derives from the concept of the 'customer logic' [10]. Second, it discusses how services are embedded in the sequence of the everyday life practices and the activities of the people. Third, it challenges the conventional approaches of service design that aim at the development of new services or the improvement of existing services and suggests that, seeing service design from the customer's point of view, who uses services to support his life practices, it takes an alternative meaning as conceiving and planning for service use and integrating services to support the implementation of the everyday life practices. Fourth, it develops a holistic service architecture that is based on the customer perspective on service design, that consists of three layers: the customer ecosystem (refers to service use), the service ecosystem (refers to service provision), and the technological ecosystem (refers to service delivery). The holistic approach of the service architecture enables relating service use with service provision in order to develop a complete understanding of service use and service value. The inclusion of the technological ecosystem serves to understand the role of the digital technologies in the provision and use of services. Fifth, the paper provides

insights for the use of digital technologies for planning service use and integrating services to support the implementation of the everyday life practices.

2 Service Design and Service Value

Service design can be broadly defined as a human-centered, creative and iterative approach to the creation of new services [14] and it is intertwined with the notions of service innovation, customer experience and value creation [15]. The early approaches on service design aimed at the design of new services or the configuration of service systems and draw attention to the design of the customer experience at the service encounter (e.g., the service blueprint) or at the multiple touchpoints of the service system (e.g., the customer journey). These approaches examined the dyadic relationship and interaction between the customer and the service system as it unfolds in the provider's domain.

The complexity of service systems prompted for the development of multilevel design approaches that integrate the analysis and design of customer experiences at different levels of interest. Characteristic is the Multilevel Service Design (MSD) [16] that consists of three hierarchical levels of service design: the service concept, the service system and the service encounter. Designing at the service concept level requires positioning the service in the customer's 'value constellation experience' and relating it to relevant services that may precede or follow the use of the core service.

With the increasing complexity of the service environment and the fragmented nature of service provision, service design evolved beyond the dyadic customer–provider interaction to develop network approaches that examine the roles and the multilateral relationships of several service actors. These approaches aim at the description of activities and interactions of network actors and the design of services to support these activities. The Service Delivery Network (SDN) is a network of multiple service providers that are together responsible for the provision of a connected, overall service experience [17]. The network can be formed either by the provider's initiative (e.g., an e-commerce company that cooperates with particular partners for payments, delivery, etc.) or by the customer (e.g., holidays that integrate services about accommodation, transportation, entertainment, etc.). Depending on who is the leading actor, the design can reflect a provider-centric or a customer-centric posture in coordination and relationship management. Other service design research emphasized on the mapping of the service network with regard to the participating actors, their roles, services provision and use and the resulted service experiences [12]. Caic et al. [24] performed the mapping of the participants in service networks and recognized patterns with common characteristics.

Service design research has been largely influenced by the concept of service value, as service design aims ultimately at the creation of value for the customer. Major impact has been exercised by the Service Dominant (SD) [1, 18], with service value being always co-created with the customer and determined phenomenologically by the customer when it is used (value-in-use) in the customer context (value-in-context) [1]. The service design research that is inspired by SD logic has as common characteristic the use of oscillating foci in order to address the requirements of analysis at the micro, meso, and macro levels of the overlapping service ecosystems [18]. Vink et al. [19] developed Service Ecosystem Design as a theoretical approach to promote the ecosystemic understanding

of service design. Beirao et al. [20] suggested an approach for the study and design of services in healthcare at micro (patient), meso (healthcare provider), and macro level (national health system), noticing that the impact goes both upward and downward, from micro to meso and to macro levels, and the reverse. Likewise, Trischler and Trischler [21] suggest a multi-level approach for public service design.

An alternative perspective on service value is provided by the Customer Dominant (CD) logic [10, 11] that focuses on the customer and his functions for the creation of value in the realm of his life practices. CD logic focuses on the customer, rather than on the provider, the service system or the service itself, and shifts the interest on what the customer is doing with services in his life practices. Service is naturally embedded in customer's life practices and service value is formed in the customer's context when the service is used, influenced and facilitated by the actions of other actors (providers, friends, etc.). In accordance with the CD logic, Becker and Jaakkola [22] suggested the concept of the 'consumer journey' as a next service design level that captures what customers do in their everyday lives to achieve their goals, implying a broader focus than that of the customer journey. Lipkin and Heinonen [23] investigated how the customers, as human actors, shape experiences in customer ecosystems as a result of using services in their own lifeworld. Bettencourt and Ulwick [25] recommended a method to identify what customers try to do and what is needed for the successful implementation of their activities.

3 The Customer Perspective in Service Design

This section presents a holistic approach for customer-centric service design that refers to the way that services are embedded in people's lifeworld and are used in the everyday life practices. The approach is based on the CD logic [10, 11] and introduces the 'customer logic' in service design. The customer logic refers to customer-specific patterns of how customers live their lives, perceive their needs, perform their everyday functions, choose among available offerings and experience the use of service. In order to understand the use and value of a service, it is necessary to develop a holistic understanding of the customer's life, context, practices and experiences, as well as how the service supports customers' life.

The CD logic is based on the value conceptualization of Gronroos and Voima [13] that defines value creation in three spheres: a) the provider's sphere, where the service producer develops and provides the service, b) the customer sphere, where the customer uses/integrates services and potentially adds other self-resources and creates value as 'value-in-use', and c) the co-creation sphere, where the customer interacts with the provider for the co-creation of value, potentially with the participation of other stakeholders. Hence, the focal role goes to the customer, who decides for service use and creates value. The provider can support and influence customers' value creation, directly and indirectly, and service design is a first order opportunity for this.

Service systems are composite configuration of actors and resources that require different perspectives and multilevel design approaches. In this paper, we suggest a holistic approach that involves the perspectives of the customer and the provider in service design, but adopts the 'customer logic' and hence regards service design from

the customer's point of view. People's life evolves as a sequence of activities and services can be embedded in these activities to support people in the accomplishment of their goals. The emphasis is put on customer's sphere of value creation, on the activities of the people and the way that services can be embedded in order to provide some benefit. The conceptualization of the customer perspective, as compared to the provider perspective, is depicted in Fig. 1.

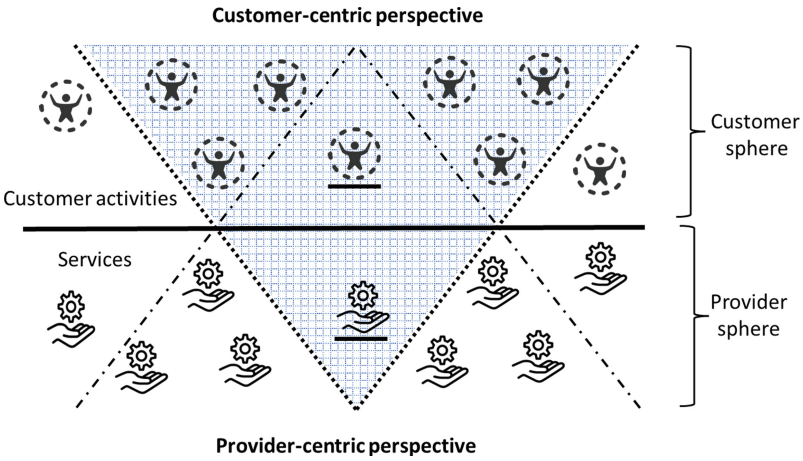

Fig. 1. The customer perspective on service and service design

According to the customer perspective, the attention is on the customer activities, how services can be used to support the customer activities and what is the impact of service use on the other activities of the customer: what else can (not) the customer do, what other activities are (not) compatible and can (not) be used, what opportunities for other activities are effectuated. For example, people that commute to work can take a taxi or use public transport, which entails they can combine different sets of activities (e.g., when going by taxi they save time for some extra activities at home or at work, when going by public transport they can work, communicate with others or surf on the internet). When people telework, they do not need commuting services, but they employ teleworking services and consequently their ecosystem of everyday activities can be shaped in a completely different way (e.g., cook, clean the home, take care other people at home, etc.).

The provider-centric perspective, on the contrary, lays the attention on the service provision, how service can be used to support a particular customer activity and what other services can be triggered by the particular customer activity. For example, the Multilevel Service Design [16], that has exercised considerable impact in the service design literature, requires positioning the service in the customer 'value constellation experience' and relating it to relevant services that precede or follow the use of the core service offering. This perspective is a step forward towards the design of services embedded in the customer's lifeworld, as it places the service into the larger context of the customer experience, but the scope remains restricted around the core service offered

by the provider. It can provide several insights for service design; however, it is different from the customer-centric perspective proposed in this paper, which provides a different perspective on service and different insights for service design, as they are presented next.

We know the customer participates regularly in service design projects that follow the conventional approaches, so what is the difference with the proposed customer-centric perspective and what is the role of the customer in it? Service design is a procedure exercised by the service provider for the 'design' of a new service or the improvement of an existing one, that includes as typical phases the ideation, development, prototyping and launch. It is obvious hence that service design reflects the provider's perspective on services and service processes. There are several design approaches that introduce the customer in the design process as co-designer, as evaluator or with other roles, but the goal of customer participation is to support the design process that is organized, implemented and orchestrated by the provider.

The proposed customer-centric perspective on service design does not seek to view simply the same design procedures through the eyes of the customer and to introduce the customer's interest and concerns – it is already done by conventional design methods. It requires to emphasize on the use of service, rather than the development of service, and reinvent the meaning of service design. When the interest is placed in the way services are used in the series of activities performed in the lifeworld of the customer, the design does not refer to actions and decisions about the features of the service, but to the way the customer conceives and plans the use of services in these activities. This conceptualization of service design is compatible with the meaning of the word 'design' (e.g., in Merriam-Webster it is defined as: "to conceive or execute a plan", "to create, fashion, execute, or construct according to plan", "to have as a purpose").

Service design from the customer-centric perspective means the customer decides and plans the use of services in the series of activities performed in the everyday life practices. In particular, as these activities are connected in a timeline, service design means also the customer combines and integrates services. Hence, the service design methods that are required to support the customer-centric perspective of service design should support essentially these two basic functions of the customer: planning for service use and integrating services. Later we discuss how digital technologies can support the development of service design within this perspective.

Figure 2 presents different configurations of service provision and use with regard to the value creation framework of Gronroos and Voima [13]. The customer domain includes the series of people's interconnected (chained) activities, the provider domain refers to service development and provision, and co-creation domain refers to the interaction and collaboration between the customer, service providers and possibly other stakeholders (e.g., friends, family members, community members, social media members, business partners and associates) for the provision and use of services. We distinguish the following types of service configurations: a) Customer activity that is not supported by any service (e.g., going to work on foot or by bicycle). b) Customer activity supported by service offered by the provider (e.g., going to work by taxi). c) Customer activity supported by service co-created by the provider and the customer in the provider's context

(e.g., customization of a meal to comply with particular dietary requirements). d) Customer activity supported by service co-created by the customer and the provider in the customer's context (e.g., navigation services adapted to the location and the preferred mode of transport of the customer). e) Customer activity supported by services offered by the provider as a package (e.g. hotel reservation that includes pick-up service from the airport). f) Customer activity supported by two (or more) separate service items provided as an add-on offer (e.g. transportation reservation and hotel reservation). g) Customer activity supported by two (or more) separate service items provided by different providers and combined together by the customer (e.g., separate transportation reservation and hotel reservation). h) Customer activity supported by service developed and offered by the provider with the support of a provider's community (e.g., e-commerce services supported by a community of experts or past users that provide information or solutions). i) Customer activity supported by service developed and offered by the provider with the support of a customers' community (e.g., e-commerce services supported by friends, peers and colleagues that provide information or solutions). j) Customer activity supported by service provided by customers' community (e.g., friends, peers and colleagues that provide information or solutions).

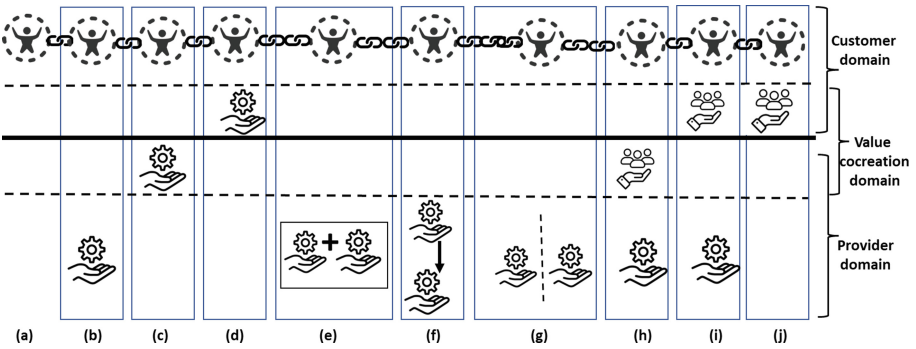

Fig. 2. Configurations of service provision and use

The horizontal axis outlines the timeline of people's practices as a series of activities in a certain part of their everyday life and the way they are interconnected with each other, as well as the services that are used, from several service providers, to support the implementation of these activities. Hence, we can understand better what the user is doing in his life, as well as how services are embedded in these activities and used for the delivery of certain benefits. This analysis can reveal patterns in the lifeworld and the lifestyles of people and in the use of services for the support of their practices. Such patterns, as well as the underlying customer needs and preferences, can be extremely useful for the design of services (according to the conventional, provider-centric perspective) and the development of service models.

The vertical axis describes a particular practice of the user and the potential use of service(s) for the support of this practice. Here the focus is on the dyadic relationship between the user and the provider that can be approached by the micro and meso level

design methods that are used in service research for the design of service provision and service experience.

4 A Service Architecture for Customer-Centric Service Design

In Fig. 3 we outline a holistic service architecture that elaborates on the concepts of the customer-centric service design. The architecture consists of three layers: a) the customer ecosystem that refers to service use, b) the service ecosystem that refers to service development/provision, and c) the technological ecosystem that refers to service delivery. This architecture highlights the need for comprehensive approaches that incorporate in the same framework the research about service development/provision, delivery and use in order to support the better understanding of their relations and interdependencies.

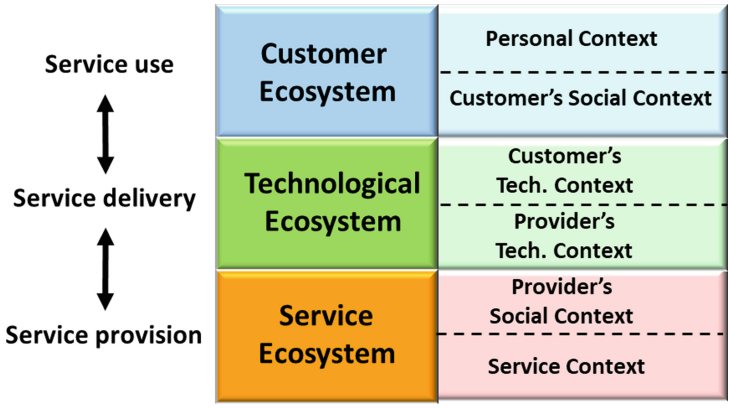

Fig. 3. A service architecture for customer-centric service design

The customer ecosystem is based on the customer logic [10, 11] that refers to user-specific patterns of how people live their lives, perceive their needs, perform their everyday functions, choose among available offerings and experience the use of service. Service use takes place in the customer context that refers to the values of the user (beliefs, attitudes, preferences), the situation of the user (needs, objectives) and the conditions that prevail during service use in the physical and the social environment of the user. The customer's social context refers to the family members, friends and other acquaintances with whom the user is related and interacts, as they can affect the value system and take a role in the everyday life practices of the user.

The service ecosystem is the aggregation of service systems that are available to provide services to the customer. The service context refers to the available services, the requirements and the processes for service design and development, the service/business models employed, the market characteristics, the business relationships and collaborations with other providers, distributors and suppliers. The provider's social context refers to the communities of customers, partners and associates that are developed and coordinated by the provider for the support of service provision, selling and use.

The technological ecosystem refers to the digital technologies that are available for the delivery and use of services by the customers. We distinguish between the provider's and the customer's technological context, with the former referring to the technologies employed for the development and delivery of services by the provider and the latter to the technologies employed for the acquisition and use of services by the customer. The technological ecosystem includes also the capacities and the skills required, the supplementary resources needed and the support models employed for service delivery and use.

The service architecture suggests the need for zooming in the requirements of service design in each particular layer, by exercising available methods and tools from the literature, and zooming out to see how they are relating to and affecting each other, in order to obtain a holistic understanding of service use in the life practices of the customers. The customers may adopt different use patterns according to their particular situations and conditions of their physical, social or technological context. The concurrent examination of the factors in these three layers will provide insights for the relationship between service use and the impact of these particular contexts. For instance, providers sometimes realize their services are not used as they were designed, but the customers invent different uses. The point here is not to alter the design process as flawed, but to learn from the way the users really use services in their life practices. This knowledge can provide insights for the development of alternative service configurations, technologies and service/business models to support the unanticipated preferences and service use patterns.

The inclusion of the technological layer between the customer and the service ecosystems supports the combined analysis of the digital and the physical aspects of services, takes into account the context of the user and service use patterns and provides insights for the development of digital and 'smart services' that are embedded successfully in the life practices of the people to improve the quality of life. Today there are ample opportunities for the development of such services in different environments, such as in 'smart cities', 'smart transportation', 'smart homes', 'smart energy', 'smart/independent living, etc. Not least to mention, it can provide insights for the development of cyber-physical service systems and augmented reality applications that can embed services on the digital or the physical environment of the users.

5 Planning and Integration of Service Use

The customer-centric perspective on service design suggests the key requirement is the understanding of the way customers conceive and plan the use of services in their everyday life practices. Hence, service design research requires the development of new approaches that support the planning of service use in the timeline of customer activities and the integration of services from different service providers. How can existing and new technologies support the understanding of service use in the everyday life activities, the planning of service use and the integration of services?

Service use in customer practices is difficult to be analyzed. Service design research employs a variety of quantitative and qualitative methods (interviews, case studies, ethnographic research, etc.). Even though they are difficult to be implemented, they

are extremely useful in order to gain better understanding of the customer logic in service use. Digital technologies can provide additional and more effective methods for the identification of service use patterns at individual and collective level. For instance, tracking and lifelogging technologies and can capture user behavior in digital environments, as well as a variety of data about the user, the contextual parameters and the timeline of service use. Data analytics technologies enable the observation and measurement of human behavior, which can allow the analysis, modeling and experimentation with human behaviors, reveal behavioral patterns and support a dynamic adaptation of service provision. User profiling tools automatically capture the interest, contextual parameters, and past behavior of the user or similar users in order to personalize service experience. All these technologies can provide a basis for the development of tools that support the understanding of the way that people use services and create value in their life practices.

The planning of service use is not supported directly by technologies and tools today. There are personal activity planning tools, like diaries and other particular applications, that focus on the scheduling and organization of the everyday tasks. In addition, there are some applications that can recognize certain services embedded in the everyday schedule of the people, such as in the case of travel services that are automatically included in the digital diaries of the users. All these tools need to be extended and modified in order to include services in a systematic way and relate them to the execution of practices and activities. More importantly, they need visualize the use of services in order to support the planning of service use and the review and evaluation of past service use. This information will provide rich insights for the role of services in the life practices of the people.

The abundance of activities and services makes necessary the facilitation of the user in the integration of services. Today several digital mega-platforms, such as Google, Apple, Microsoft and Facebook, accommodate services from various providers and, more importantly, provide opportunities for single sign-on methods to the services offered by different providers. At the moment the support remains at the access of different services and the integration of these various services remains at minimum level. In the future, it will be required the integration of these services and their connection to the life practices. In addition, it will be required the development of federated platforms that would support the user in the use of a variety of services, seamlessly integrated from different providers.

6 Conclusions

The paper employs the ‘customer logic’ [10] to study the way that services are embedded and used in people’s lifeworld and introduce a customer-centric perspective in service design. Unlike the convectional approaches of service design that aim at the development of new services or the improvement of existing services, the customer perspective in service design explores the meaning of service design for the customer, who uses services to support his life practices. Therefore, the paper suggests a re-conception of service design as conceiving and planning for service use and integrating services to support the implementation of the everyday life practices of the customer. The paper provides also a holistic service architecture for service design that enables seeing and relating service use with service provision and delivery.

The paper provides several research and practical implications for service design. As services are embedded more and more in people's life and affect the practices of the people, the scope of service analysis needs to be extended beyond the direct interaction between customer and provider. Service value can be affected by other services and contextual parameters and it may occur beyond the service interaction, so that it is not directly visible to the provider. In addition, users do not always experience service according to how it is designed by the providers. The customer-centric perspective in service design requires not only to broaden the scope, but to change the lens through which we examine services, and calls for refocusing on the role of services in the series of activities the user performs in his life practices. This way we can understand better what the users are doing and what they wish to achieve, which can be valuable insights for the design of better services.

Future research can address the conceptual elaboration and the further explanation of the customer-centric perspective and the service architecture, the application of these concepts in practical studies for their validation and improvement, and the examination of methods and tools that support the planning of service use and the integration of services. Some particular research questions can refer to the mapping of existing service methods to the service architecture, the investigation of the impact of collaboration and service networks on the customer-centric perspective and the service architecture, the inclusion of the macro level of service design, the analysis and design of applications for the planning of service use and the integration of services.

References

1. Vargo, S.L., Lusch, R.F.: Service-dominant logic: continuing the evolution. J. Acad. Mark. Sci. **36**(1), 1–10 (2008)
2. Huang, M.H., Rust, R.T.: Technology-driven service strategy. J. Acad. Mark. Sci. **45**(6), 906–924 (2017)
3. Wünderlich, N.V., et al.: "Futurizing" smart service: implications for service researchers and managers. J. Serv. Mark. **29**(6/7), 442–447 (2015)
4. Spohrer, J., Maglio, P.P.: Service science: toward a smarter planet. In: Karwowski, Salvendy (ed.) Service Engineering. Wiley, New York (2009)
5. Shiroishi, Y., Uchiyama, K., Suzuki, N.: Society 5.0: for human security and well-being. Computer **51**(7), 91–95 (2018)
6. Anderson, L., et al.: Transformative service research: an agenda for the future. J. Bus. Res. **66**(8), 1203–1210 (2013)
7. Kristensson, P.: Future service technologies and value creation. J. Serv. Mark. **33**(4), 502–506 (2019)
8. Brenner, W., et al.: User, Use and Utility Research. Wirtschaftsinformatik **56**(1), 65–72 (2014)
9. Kunz, W.H., Heinonen, K., Lemmink, J.G.: Future service technologies: is service research on track with business reality? J. Serv. Mark. **33**(4), 479–487 (2019)
10. Heinonen, K., Strandvik, T.: Reflections on customers' primary role in markets. Eur. Manag. J. **36**(1), 1–11 (2018)
11. Heinonen, K., Strandvik, T.: Customer-dominant logic: foundations and implications. J. Serv. Mark. **29**(6/7), 472–484 (2015)
12. Patrício, L., de Pinho, N.F., Teixeira, J.G., Fisk, R.P.: Service design for value networks: enabling value cocreation interactions in healthcare. Serv. Sci. **10**(1), 76–97 (2018)

13. Grönroos, C., Voima, P.: Critical service logic: making sense of value creation and co-creation. J. Acad. Mark. Sci. **41**(2), 133–150 (2013)
14. Ostrom, A.L., Parasuraman, A., Bowen, D.E., Patrício, L., Voss, C.A.: Service research priorities in a rapidly changing context. J. Serv. Res. **18**(2), 127–159 (2015)
15. Yu, E., Sangiorgi, D.: Service design as an approach to implement the value cocreation perspective in new service development. J. Serv. Res. **21**(1), 40–58 (2018)
16. Patrício, L., Fisk, R.P., Cunha, J.F., Constantine, L.: Multilevel service design: from customer value constellation to service experience blueprinting. J. Serv. Res. **14**(2), 180–200 (2011)
17. Tax, S.S., McCutcheon, D., Wilkinson, I.F.: The service delivery network: a customer-centric perspective of the customer journey. J. Serv. Res. **16**(4), 454–470 (2013)
18. Vargo, S.L., Lusch, R.F.: Institutions and axioms: an extension and update of service-dominant logic. J. Acad. Mark. Sci. **44**(1), 5–23 (2016)
19. Vink, J., Koskela-Huotari, K., Tronvoll, B., Edvardsson, B., Wetter-Edman, K.: Service ecosystem design: propositions, process model, and future research agenda. J. Serv. Res. **24**(2), 168–186 (2021)
20. Beirão, G., Patrício, L., Fisk, R.P.: Value Cocreation in service ecosystems: investigating health care at the micro, meso, and macro levels. J. Serv. Manag. **28**(2), 227–249 (2017)
21. Trischler, J., Trischler, J.W.: Design for experience: a public service design approach in the age of digitalization. Public Manag. Rev. 1–20 (2021)
22. Becker, L., Jaakkola, E.: Customer experience: fundamental premises and implications for research. J. Acad. Mark. Sci. **48**(4), 630–648 (2020)
23. Lipkin, M., Heinonen, K.: Customer ecosystems: exploring how ecosystem actors shape customer experience. J. Serv. Mark. **36**(9), 1–17 (2022)
24. Caic, M., Holmlid, S., Mahrz, D., Odekerken-Schroder, G.: Beneficiaries' view of actor networks: service resonance for pluralistic actor networks. Int. J. Des. **13**(3), 69–88 (2019)
25. Bettencourt, L.A., Ulwick, A.W.: The customer-centered Innovation Map. Harv. Bus. Rev. **86**(5), 109 (2008)