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Change in meaning and service innovation: a design research contribution to the S-D logic

Purpose –The S-D logic enabled the phenomenological understanding of value cocreation in a service ecosystem which positioned the new forms of value cocreation and resource integration in the center of service innovation process. However, the underlying phenomenological aspects of service innovation needs further exploration to understand how changes in resource integration and value cocreation occur. On the other hand, innovation driven by design focuses on change in meaning, a concept well explored in design research, as a main driver of change arising in use and interaction, dependent on the context and institutional arrangements, and dynamically emerging. Thus, the purpose of this paper is to explore the conceptual relevance of change in meaning for service innovation grounded in the S-D logic.
Integrating the design-related conceptualization of meaning as a concept that contributes to new interpretation of rescues and value cocreation can bring a more nuanced perspective to the cocreative aspect of service innovation. The concept of change in meaning can make valuable multidisciplinary connections to S-D logic and set the common ground in adopting a more phenomenological perspective of service innovation.

Design/methodology/approach – This paper builds a conceptual framework for understanding main building blocks of service innovation informed by change in meaning. The framework is based on the conceptual exploration of the S-D logic literature on service innovation and design research literature on meaning, uncovering similarities, differences and mutual dynamics. The framework provides the explanation of the relationships between the main building blocks relevant for service innovation facilitated through change in meaning.

Findings – The findings indicate shared characteristics between meaning and value that set the ground for understanding change in meaning as a complementary perspective in understanding service innovation. The concept of meaning brings insights into phenomenological aspect of value cocreation by emphasizing its interpretative quality. Examination of the relationship between meaning and value cocreation reveals that meaning and value cocreation are similar but have distinct roles in the cocreation process where meaning facilitates resource interpretation as an important step underlying service innovation.

Originality/value – This paper expands the S-D logic and service innovation literature with multidisciplinary contributions on meaning from design research. The concept of meaning in this paper combines research streams relying on similar concepts and integrates them in comprehensive framework that can be used as a starting point for future research in service innovation. The framework shows service innovation as a dynamic process where value cocreation and change in meaning coexist and are mutually dependent thus contributing to the richer understanding of the phenomenological quality of service innovation.

Keywords – S-D logic, service innovation, meaning, value cocreation

Paper type – Conceptual paper

Introduction

With the ongoing global shift towards acknowledging the importance of services, service innovation has become a research priority, particularly multidisciplinary approaches that answer to service innovation's rapidly changing context (Ostrom et al., 2015). Service-dominant logic (S-D logic) has brought a new perspective to service innovation, addressing it through new forms of value cocreation and resource recombination (Lusch and Nambisan, 2015), designing new value propositions (Skålén et al., 2014), multi-actor perpsective (Michel et al., 2008; Rubalcaba et al., 2012), and service innovation intertwoned with the practices in the service ecosystem (Edvardsson et al., 2013, Koskela-Huotari et al., 2016). Service innovation defined by the S-D logic as "rebundling of diverse resources that create novel resources that are beneficial (i.e., value experiencing) to some actors in a given context" (Lusch and Nambisan, 2015, p. 161), brings forward the importance concepts such as new value cocreation and resource recombination. However, the underlying phenomenological aspects of service innovation supported by the S-D logic needs further conceptual and theoretical exploration (Helkkula et al., 2018). Additionally, as services are complex and embedded in service systems, multidisciplinary approaches can bring new perspectives on how this complex issue can be approached to ensure value cocreation in the systems of people, technologies and information (Maglio and Spohrer, 2013). One of the service innovation approaches with such multidisciplinary potential is service design. Service design is a multidisciplinary, human-centered and holistic design-driven innovation approach grounded in design research and adopting the service perspective (Patrício et al., 2018). Due its interactive and cocreative focus, it is seen as having great potential for leveraging service innovation (Ostrom et al., 2015). Similar to service innovation focus on the value of innovation for multiple actors, design innovation is often focused the meaning for multiple actors (Krippendorff, 2006). Meaning is the focal concept of human-centered design and innovation it entails positing that product form does not follow its function, but should follow its meaning (Krippendorff, 1989). From this perspective, all interactions people engage in occur because the interactions foremost make sense to them. However, the two concepts; meaning and value, although often brushed together and seemingly the same have been outside the scope of more detailed inquiry. Although both meaning and value share a common conceptual ground (Kustrak Korper et al., 2018), the intersection of service innovation and design research is still theoretically and conceptually underdeveloped (Antons and Breidbach 2018). Multidisciplinary considerations can help in bridging the theoretical gaps between the core concepts of design research and S-D logic important for the future theoretical development of design-related approaches to service innovation. Phenomenological approaches for understanding value can bring important contribution to the S-D logic (Helkkula et al, 2018; Helkkula et al., 2012a; Helkkula et al., 2012b; Jaakkola et al., 2015). However, to this date little attention has been devoted to conceptualizing meaning as an integrative element necessary to understand value in service research.

Thus, to address these challenges, this paper focuses on conceptual exploration of meaning as a core concept in design research and its contribution potential for service innovation defined though the new forms of value cocreation (Lusch and Nambisan, 2015). In this conceptual exploration, this paper connects service research and design research, bringing the concept of meaning as a new lens for understanding the phenomenological and interpretative aspects of value, and proposing *changes in meaning* as a new perspective on service innovation. *Meaning*, as conceptualized by design research, is an outcome of interpretation that precedes evaluation, being idiosyncratic, dynamic, and arising in use (Almquist and Lupton, 2010; Krippendorff, 1989; Krippendorff, 2006; Sengers and Gaver, 2006). Therefore, meaning can be viewed as a complementary and integrative concept, contributing to understanding value cocreation in S-D logic through a more holistic perspective, adding an interpretative aspect from design research, and explaining why value is phenomenologically created and interpreted.

This paper will explore the concept of meaning from design research through the S-D logic lens and it consists of three parts. The first part explores the concepts of value from the S-D logic perspective and of meaning from a design research perspective though the detailed literature review, focusing on the main elements of their conceptual domains. The second part examines how meaning complements value, exploring the complex dynamics between the two concepts to position them more closely within the S-D logic framework. The third part provides illustrative case for the conceptual framework. The article concludes with a discussion and future research directions.

Conceptual exploration of value and meaning

The conceptual exploration of the dynamics between value and meaning presented in this paper will be framed from the S-D logic perspective. For the conceptual dynamics to be understood, the role of meaning in the process of value cocreation through resource integration will be examined first. This is also required to further develop a conceptualization of change in meaning as a form of service innovation, which is currently primarily viewed through new ways of resource integration for new value cocreation (Lusch and Nambisan, 2015). This section will, therefore, provide a literature-based conceptual exploration of value cocreation and resource integration within S-D logic and meaning from design research, integrating it into a proposed conceptual framework at the end of the section.

S-D logic perspective on value

What value is, and how it comes to be, remains a central question in marketing strategy and consumer behavior. In the former, value is often addressed as *customer* value responsible for building a firm's competitive advantage (Kumar et al., 2006; Woodruff, 1997). In the latter, value is viewed as customer's *perceived* value responsible for her or his behavioral responses (Khalifa, 2004; Sanchez-Fernandez and Iniesta-Bonillo, 2007). Value is also a central concept

in service research (Grönroos and Svensson, 2008), viewed from a more holistic and relational perspective, with service as a fundamental basis of exchange (Vargo and Lusch, 2004, 2008). The 11 fundamental premises (FPs) of S-D logic emphasize the axiomatic status of FPs related to value, most importantly FP 10, which states: "Value is always uniquely and phenomenologically determined by the beneficiary" (Vargo and Lusch, 2016). Also, FPs 6,7 and 8 emphasize the conceptual centrality of value and value cocreation, stating that value is always cocreated among multiple actors; it cannot be delivered and added to products but only cocreated based on actors' value propositions, and a service-centered view is "inherently beneficiary oriented and relational" (ibid.). Gummerus (2013) concludes that division between value as a process and value as an outcome is not always explicit, although value and value cocreation tend to be viewed more from a process perspective. Therefore, it can be contended that value is positioned as a dynamic concept with changing the level of complexity depending on the number of actors and their roles during service interaction.

In S-D logic, value is observed through different lenses and at different levels, but it is always viewed as cocreated in use during interaction, focusing on how it is realized, and not so much on what it is (Grönroos and Ravald, 2011; Grönroos and Svensson, 2008; Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004). Some perspectives on value and value cocreation evolve from an individual and dyadic level to more contextual and social level, highlighting value-in-context and value in a social context (Chandler and Vargo, 2011, Edvardsson et al., 2011). The perspective that focuses on a macro level encompasses a broad network of actors in a service ecosystem and studies the process of value cocreation in the context of intricate social and institutional environments (Akaka et al., 2013, Vargo and Akaka, 2012). However, this perspective does not provide a detailed account of what kind of value, whether utilitarian or hedonic, is created and more importantly for whom (Saarijärvi et al., 2013). This perspective can, therefore, pose challenges in terms of defining value outcomes because the process of value perception tends to be overlooked (Mencarelli and Rivière, 2015). Also, some research grounded in service logic advocates that viewing all interactions as value cocreation minimizes important distinctions between the joint sphere where cocreation takes place (service provider and customer) and the individual sphere where value creation happens independent of the service provider (customer with other actors) (Grönroos and Voima, 2013).

Another perspective focuses on the micro level and emphasizes value's experiential component, with the focus on individual customers. Although this may result in viewing value from a more cognitivist lens (Sandström et al., 2008), this perspective has also addressed how customers cocreate value through a phenomenological lens. For instance, viewing value cocreation as a practice, McColl-Kennedy et al. (2012) define it as benefits of resource integration within particular activities and interactions. On the other hand, Helkkula et al. (2012a) distinguish practices and experiences through practice-theory and phenomenology. They argue that practices are related to routinized and observable behavior steered by shared

meanings, while experiences are related to individual and phenomenological sense-making in a particular social context. Value can, therefore, be viewed from both practice and experience perspectives, since "value cocreation practices are part of the experience of a value, regardless of the degree to which it can or cannot be verbalized, observed, felt or remembered" (ibid., p. 563). As Saarijärvi et al. (2013) suggest, because of different approaches regarding how value is determined, there is a need for extending the knowledge of value cocreation regarding its nature, its recipient, the resources, and mechanism acquired. Therefore, Helkkula et al. (2012b) contend that value arises in experience and that "service customers make sense of and experience value iteratively, based on their previous experiences or understanding" (p. 61). Therefore, it is suggested that value creation is not linear and cognitive, but rather an ongoing, iterative process, which is individual, intersubjective, social, and relational and can also take place outside service encounters. Additionally, value creation fully depends on a customer's interaction with the service provider as well as with other actors and context. Although this definition of value as arising in experience strongly emphasizes its phenomenological perspective, the focus on meaning in design can frame this problem differently by providing further interpretative layers to understand the complexity.

Finally, for the discussion of value, resources and resource integration should be addressed due to their key role in the process of value cocreation. Resource integration is also necessary for the service innovation context because it is the main mechanism of new value creation (Mele et al., 2010). Resources in S-D logic are characterized as operand and operant and becoming in use (Vargo and Lusch, 2004) where actors perform a series of activities to cocreate certain benefits (Payne et al., 2008). Therefore, resources cannot be observed outside the usage and interaction in which value cocreation happens since they are not "added" qualities. However, literature does not question how resources become, as this premise is somewhat presupposed by resources becoming in use. Nevertheless, why resources come to be is central to understanding not just value creation but also value-in-use. In their research about theorizing resource integration in S-D logic, Peters et al. (2014) have made a step towards understanding different ontological and epistemological perspectives in advancing knowledge of resource integration. They emphasize the need to understand resource integration by defining and operationalizing interaction, how people experience it, how it is context related, and how people create meaning arising in interaction during resource integration. They also see resources as having an intended purpose that is realized only through the deployment of human capabilities. As such, resources do not have intrinsic or given value but become valuable only during intended activity. In that sense, they represent possibilities realized through interaction. Therefore, it is contended that integrating design research perspective on meaning and interaction can enrich knowledge on resources because meaning can explain resources as possibilities realized in use through human agency.

Design research perspective of meaning

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Understanding the phenomenological nature of meaning is not only necessary for understanding value and experience (Helkkula et al., 2012b) but also resource integration and how resources become (Peters et al., 2014). Therefore, this section presents different perspectives on meaning in design research and explores how they can contribute to service research and service innovation. The conceptualization of meaning in design research can broaden understanding of the phenomenological nature of how value is cocreated and how new value emerges.

Design research has already established a body of knowledge on meaning, interaction, and experience in design. Although it may seem that design is preoccupied with designing objects or artifacts, it is essentially people who are in the focus of inquiry and people as individuals aspire to meaningfulness and "perceive the world as meaningful, predictable and purposeful." (Tsai, 2014, p. 992). However, conceptualizing meaning in design research is challenging for three reasons. First, meaning in design research has been studied under multiple disciplines, although cognitive science and semantics represent a predominant field (Krippendorff, 2006; Krippendorff and Butter; 2008; Medeiros, 2014). Second, design as a discipline is still somewhat fragmented between the object-focused and human-centered views (Kimbell, 2011) marking two separate paradigms. Studies in meaning, however, tend to acknowledge the importance of a human-centered view where usability and meaning of any design are always determined by the user. Therefore, in human-centered design, the focus is shifted from the user as an object of design to the user as a subject of design (Redström, 2006). Third, challenges arise due to different ways in how research in design defines artifacts, or "things" that are designed and with which users interact.

According to Simon's (1996) definition (that is consistent with the human-centered view), design is changing existing situations into desired situations. This definition emphasizes design's focus on activity and change through artifacts in use. Although artifacts might be impulsively related to products or objects, and many times in design research they do represent them, Krippendorff (2011) argued for a different approach. This approach sees artifacts evolving on a six-level trajectory, reflecting the shift from object-centered to the human-centered paradigm and moving away from the dyadic user-artifact perspective towards systems of multiple actors. Krippendorff (ibid.) argues that the increased complexity of the social world in which people interact is responsible for this evolution of artifacts. Also, artifacts evolve alongside the trajectory due to increasing relevance of meaning. Therefore, as Krippendorff (2006, 2011) argues, on the lowest level of trajectory is (1) utilitarian understanding of products, which then evolves to (2) goods, services and identities, (3) interfaces, (4) multi-user systems and networks, (5) projects, and finally to (6) discourses where meaning comes into being through language. Such evolution of artifacts broadens the scope of how an artifact is defined. For example, one can define the meaning of an artifact through a physical product, e.g. an activity tracker, or a well-being platform, which includes

the physical product of the same technology, but also the entire system in which this product can cocreate value. What on the lowest level is represented by a product in the form of an activity tracker that keeps one informed about the number of daily steps, on the higher levels of trajectory, it can become similar to a service system e.g. a platform with many embedded functionalities an activity tracker provides because of many actors involved. Such an activity tracker could not only provide basic activity information through its technology but could also serve as a connecting platform with other users, physicians, insurance providers, or others in the healthcare ecosystem. Thus, this artifact is not only an activity tracker but a platform that influences and changes the meaning of well-being to all the people who use it.

Although this trajectory is fairly complex, it is important to understand the concept of meaning, because it emphasizes the evolution from the passive role of artifacts, existing as interfaces through which designers deliver functionalities, to end users in order to answer their presupposed needs, towards collaborative systems of meaning. The meaning cannot be designed as such, but one can only design *for* meaning, acknowledging an outcome that is never fully predictable (Krippendorff, 2006). The unpredictability involved in designing for meaning of such complex artifacts does not suggest that there is no structured way to do it. On the contrary, the roles of both designers and users are understood differently, acknowledging that interaction with an artifact represents an opportunity for different, but idiosyncratic, meanings to arise (Redström, 2006). Looking at this process from a service lens, the designer can be viewed as a service provider and the user as a service beneficiary, with meaning evolving during the interaction, similar to value-in-use. The designer cannot fully control how users make sense of the artifact they interact with depending on the situation and context. Therefore, to be successful when designing for meaning, this needs to be acknowledged, thus enabling the possibility of successful interpretation. In that sense, what for the designer (provider) might seem like a constraint (unpredictability of designing for meaning) for the user (beneficiary) might represent a greater opportunity for interaction, interpretation, and value creation.

Characterizing meaning in design research

This section will focus on definitions and characterizations of meaning from design research. It will also clarify the role of meaning in design and show how understanding meaning from a design perspective can inform conceptual dynamics of value and meaning, and enrich the service perspective of value cocreation. As already stated, due to interdisciplinarity and fragmentarity in design research, there are different, sometimes intertwined, definitions of meaning from perspectives such as use and product experience (Boess and Heimrich, 2008; Cupchik and Hilscher, 2008; Desmet and Hekkert, 2007, Redström, 2006), product semantics and language (Kazmierczak, 2003; Krippendorff and Butter, 2008; Medeiros, 2014; Oppenheimer, 2005), and human-computer interaction (Sengers and Gaver, 2006). Some authors discuss meaning as closely related to experience using theoretical frameworks from

consumer psychology, although the detailed focus on experience from that perspective is beyond the scope of this paper. Desmet and Hekkert (2007) provide a framework for product experience based primarily on an affective component that emphasizes the importance of interaction and interpretation, although they appraise meaning as attached to products, and therefore secondary to experience. Their main construct consists of "aesthetic experience", "emotional experience", and "experience of meaning", where all unfold during human interaction with artifacts and have affective, cognitive and behavioral consequences. "Experience of meaning," (Hekkert, 2006) particularly, is accompanied by cognition (interpretation, association, memory retrieval), and is sensitive to individual and cultural aspects. What is usually emphasized in this view is that the sense-making process is cognitive, building upon previous experiences and meanings that emerged from it. It also suggests that meaning, especially at the individual level, can become stronger or weaker with every subsequent interaction.

Another approach focuses on meaning arising in use and interaction. This approach contends that people are always making sense of artifacts they use (Krippendorff 1989), where artifacts are defined based on Krippendorff's already mentioned trajectory (2006, 2011). Therefore, meaning has axiomatic status and represents the essence of human-centered design, acknowledging that what entices usage or interaction with artifacts is the sense-making activity. Medeiros' (2014) definition conceptualizes meaning as a semantic quality of a product that leads to pragmatic and emotional interaction. Medeiros also assumes that meaning entices interaction. Almquist and Lupton (2010) repeat this particular aspect and repeat that latent meanings and functions of objects happen in the context of use and interaction, based on user's subjectivity that cannot be predicted. Therefore, the idea that meaning can be designed is considered inadequate because it presupposes that meaning is a quality that can be produced and added to artifacts and, consequently, is always interpreted in the same way. Sengers and Gaver (2006) advocate that the interpretative side of interaction is crucial for any evaluation, and designers should therefore not seek to control users' interpretations. Instead, they should design interactive systems that allow and encourage many interpretations. Through this approach, users are given incentives to engage. These insights are significant in the context of service from two aspects. First, it acknowledges that value cocreation involves interpretation, which is always part of a user's idiosyncratic sphere, enfolding in interaction. Moreover, value propositions, if viewed as interactive platforms, should be designed to enable multiple interpretations to stimulate value cocreation. This is consistent with the phenomenological views on experience in S-D logic (Helkkula et al., 2012b, Jaakkola et al., 2015), although S-D logic does not address in detail the interpretative power of meaning.

Krippendorff (1989, 2006) summarizes meaning as arising from a cognitive sense-making process, describing it in general terms as idiosyncratic interpretation, guided by situational or contextual elements of interaction taking place. For Krippendorff (2006), meaning is externally unobservable. Meanings are not representations, but facilitators of usage, where artifacts are dynamic and their meaning changes with use. Therefore, if something does not

make sense in a particular context, it will not be used, and no value can arise from it. Again, this points towards the interdependent dynamics that evolve around meaning and value. Context is also crucial for meaning, which Krippendorff (ibid.) defines as the boundary in which artifacts can mean something. With every new contextualization, meaning changes because the boundary changes as well. This can be related to some extent to Helkkula et al.'s (2012b) notion of value as an experience explaining how value is always based on previous understandings of past or imaginary experiences. Thus, Krippendorff's conceptualization of meaning highlights the interconnectivity and significance of usage, artifacts, and context, which are reinforced with every new use. This view also states that meaning cannot exist without human involvement. It uses an ecological psychology perspective (Gibbson, 1979) to emphasize how possibilities and restrictions of interpretation are affected by the direct perception of an actor. Thus, the environment is perceived through affordances, where affordance is the "perception of one's ability to do something with what is sensed" (Krippendorff, 2006, p. 43). Artifacts are therefore seen as having certain use or benefit in a particular context that allows for a particular meaning to be interpreted. If connected to one of the main postulates of S-D logic regarding resources, this can explain how resources become through meaning, i.e. through making sense, because resources also require human agency to be recognized as useful or beneficial in a particular context (Peters et al., 2014).

People make sense of things and use them according to their interpretation of artifacts' meaning in a particular context. Therefore, meaning can contribute to understanding "why" people engage in any interaction in the first place. This conceptualization of meaning can bring new insights to the understanding of value in S-D logic. Meaning, much like value, is not viewed as a property that can be added and delivered to the objectified recipient. Instead, its creation requires interaction and is always phenomenological and contextual. Furthermore, thinking about value-in-use from S-D logic and considering the conceptualization of meaning in design research, the concept of value cocreated through usage can be connected to its meaning, and with what artifacts, defined broadly, were meant to be used for. Meaning, as a dynamic concept, resonates strongly with the main concepts of S-D logic and should, therefore, be considered an integral part of its discourse related to value and resources.

Unfolding the dynamics of value and meaning

The literature review presented in previous sections indicates that the concept of meaning from design research, particularly its human-centered view, can advance the understanding of S-D logic on value cocreation emerging through resource integration. Therefore, this section explores the dynamics unfolding between meaning and value, with the aim to advance knowledge of the phenomenological aspect of value cocreation (Jaakkola et al., 2015). This dynamic will also set the ground for understanding service innovation as a change in meaning, redirecting the attention of innovation towards customer perception of new value, which has been neglected in previous research on service innovation (Snyder et al., 2016).

Building upon the examination of meaning in design research and value cocreation in S-D logic, Figure 1 represents the proposed dynamics of meaning and value. It explains how the interpretative side of meaning affects resource integration and subsequently value cocreation. Literature review in both design and service research supports the notion that both meaning and value arise in use or interaction, and that the key elements to understand phenomenological value cocreation are meaning, value and resources (Almquist and Lupton, 2010; Kleinaltenkamp et al., 2012; Krippendorff, 1989; Medeiros 2014; Vargo and Lusch, 2004). The fact that meaning and value arise in use is a key aspect of this dynamic because it is aligned with both the fundamental premises of S-D logic and human-centered design (Krippendorff and Butter, 2008). Both perspectives advocate that no pre-established meaning or value represented in benefits can be communicated or delivered to the beneficiary (user or actor) by the provider. However, what design research particularly emphasizes is not only a designer's inability to anticipate all the possible usages and benefits provided by artifacts but also the necessity to view ambiguities of meaning arising from different usages as a new paradigm of design (Redström, 2006). For service research, this means fully acknowledging that the provider has neither the possibility nor the necessity, to know all potential usages out of which meaning and value can arise recognizing the phenomenological aspect of value cocreation. Moreover, this opens new possibilities for understanding innovation of value propositions, because artifacts that enable multiple interpretations encourage engagement, which leads to intensifying value cocreation. This is possible because the interpretation needed for engaging in resource integration precedes value cocreation (Sengers and Gaver, 2006).

The focus on usage or interaction, terms that are complex but that are used interchangeably in this paper to make the dynamic presented in Figure 1 understandable, is implied through resource integration that is in the center of the framework.

Figure 1: Conceptual dynamic of meaning and value
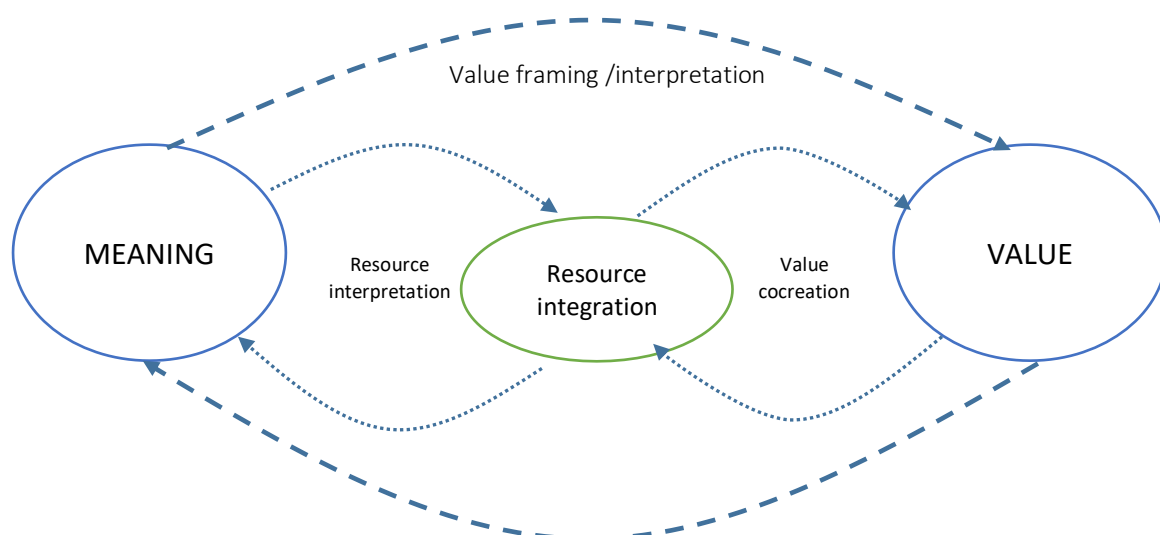
All the interactions between the elements within this conceptual framework are represented in loops because these entities are not static, and they dynamically impact each other. Due to the phenomenological and dynamic nature of both meaning and value, interpretation and framing therefore happen in continuous loops. The framework uses one general loop to explain the interrelationship between meaning and value and two smaller loops that are an integral part of the framework to explain the dynamics of meaning and value related to resource integration. S-D logic considers value cocreation is occurring through resource integration (Vargo, 2008). Therefore, resource integration is also an important element of the value and meaning dynamic. Although S-D logic's fundamental premises argue that resources become (Vargo and Lusch, 2016), it has not been clear how resources come to be. Thus, design research offers a complementary concept of meaning. This is what the loop between resource integration and meaning aims to explain. Through meaning, resources become by being interpreted by customers as meaningful for a particular use, within a particular context. The context also defines the boundaries of these dynamics between meaning and value (Krippendorff, 2006). The concept of meaning can also be connected to the view that resources become only during intentional activity (Peters et al., 2014). This interpretative side of meaning that precedes value cocreation and that is acknowledged in resource interpretation is therefore essential to understand how resources can be integrated, i.e. why something is viewed as a resource in the first place. A person's skill of cooking a simple meal will not be seen as a resource and integrated for value cocreation to volunteer, for example, to cook in a homeless shelter unless the person interprets this skill as a resource, i.e. unless the potential for value cocreation has a meaning. As such, meaning makes resources become through the interpretation of their "usefulness" in a particular context and makes them suitable for integration. Hence, interpretation precedes and enables resource integration, which consequently enables value cocreation presented in a loop between value and resource integration. Only when resources are interpreted can value cocreation take place. Also, the phenomenological value that is an outcome of value cocreation depends on the meaning based on which the resources were integrated. Therefore, the interrelationship between meaning and value integrates smaller interpretative layers. Meaning frames what is valuable, but what is valuable also reinforces the meaning that affects all ongoing dynamic relationships in the framework.

As stated in the previous sections, the first examination of design research and S-D logic may lead to the consideration that meaning in design research and value in service research are overly similar concepts. However, the phenomenological value cannot be fully understood without addressing the concept of meaning in the complex dynamic of the process of value cocreation and resource interpretation. Whether a particular interaction was valuable, and value was cocreated, can be formally evaluated only after the experience of interaction formed in use (Foglieni and Holmlid, 2017). It is therefore contended that people will engage in interaction if it makes sense or has a meaning. Whether something is meaningful is understood before the actual interaction and experience take place. Therefore, meaning can

be seen as an incentive to act and interact, or in S-D logic terms, an incentive for resource integration. Meaning advances understanding of value cocreation by framing value through the loop connecting meaning and value and through smaller loops connecting resource integration and value. Value in use is cocreated through resource integration where resources need to be interpreted first, to be seen as such.

Change in meaning as a new perspective on service innovation: an illustrative example

The dynamics showing the role of meaning in resource integration and value cocreation are The dynamic displayed in Figure 1 enables a broader phenomenological view of value cocreation, where meaning guides how resources become and are integrated, therefore shaping the emergence of value. Meaning changes how resources are interpreted, which leads to new resource recombination. Hence, positioning meaning as an integral part of resource integration and value cocreation loop can contribute to a new phenomenological perspective on service innovation within S-D logic, particularly in how it is viewed as new value cocreation and recombination of resources (Lusch and Nambisan, 2015).

Additionally, the dynamics of meaning, resource integration, and value illustrated in Figure 1 can be related to design-driven innovation, an innovation model developed within the innovation management literature. Starting from Krippendorff's (1989) idea that the form of the product does not follow function but meaning, Verganti (2008) posits that radical change of meaning is what constitutes radical innovation and names it design-driven innovation. From this perspective, new meaning can be found through the co-generation of value for multiple stakeholders, which requires changes in sociocultural models guided by firms that must determine future breakthrough meanings (Dell'Era et al., 2008, Verganti, 2008). In that sense, firms should initiate the change in meaning to bring innovation through interaction with other professional stakeholders.

As Verganti and Öberg (2013) pointed out, meaning is context-dependent, cannot be optimized, and is embedded in culture. As such, in design-driven innovation, products and other artifacts move away from their predominant functional purpose and cocreate a new context with users by providing new meaning. This concept of innovation has also been advocated by some other authors studying radical change of meaning in relation to technological innovation, considering that new technology is not essential for a breakthrough innovation (Buganza et al., 2015, Dell'Era et al., 2010). More recently, Norman and Verganti (2014) proposed a typology of innovation based on the degree of change in technology and meaning, arguing that change in meaning can indeed provide a new trajectory for innovation. Although design-driven innovation has been conceptually and empirically focused on products, it can offer new insights for service innovation. These insights come from emphasizing the need to understand the interpretative side of meaning through which change happens. From this perspective, meaning is an important element that can extend the

S-D logic view on innovation. However, exploring service innovation as changes in meaning requires going beyond design-driven innovation to integrating it with a more nuanced view on meaning in relation to new value cocreation and resource integration.

Taking the example of Uber, it can be described as an online platform that functionally responds to the need for personal transportation, but it has actually disrupted how transportation is interpreted or made sense of. Uber, therefore, represents a break-through service innovation, even if there were services using similar technologies before Uber entered the market. Uber is, consequently, not a break-through technological innovation, but an innovation of meaning in personal transportation. At a broader level, Uber not only uses existing technologies but has also reconfigured resources in such a way that they gained new meaning. What these reconfigured resources created was a meaningful new value proposition that enabled a new interpretation of resources (e.g. cars, and drivers); this change of meaning also resulted in how value was reframed. Once established, new meaning continued to be reinforced directly through the dynamics of value experienced around interaction and usage. This perspective on innovation puts the phenomenological aspect of newness into the focus of service innovation and acknowledges the interpretative relevance of the framework. It also explains how change in meaning can be seen as service innovation, which broadens understanding and opens new forms of service innovation.

Change in meaning as a perspective on service innovation can be viewed in light of the dynamics described in Figure 1, which explain how resources become through interpretation and how meaning frames value cocreation. From this perspective, new meaning can be a starting point for innovation by changing the interpretation of resources that are integrated during a particular use. In order for something to be seen as a resource, it needs to be interpreted as such, and changes in meaning thus enable innovation. Such changed integration of resources may not be about new resources alone, but about their new interpretation, affecting value cocreation and value-in-use that arises. Change in meaning will, therefore, be connected with changed interpretation of resources arising in particular situation and changing established practices. It is contended that resource integration will not occur if it is not meaningful. If value-in-use is cocreated, this phenomenologically perceived value will change the meaning of resources and facilitate innovation. If, however, change in meaning fails to frame new value, there is a possibility that the innovation will not be possible.

Discussion

This paper advances service innovation within S-D logic by introducing changes in meaning as a new multidisciplinary perspective on service innovation and value cocreation, contributing to overcome its insufficient focus on new value as perceived by the customer (Snyder et al.,

2016). In order to address change in meaning as a relevant perspective in service innovation, meaning and value are conceptually explored to highlight the relevance of meaning, a fundamental concept from design research (Desmet and Hekkert, 2007, Kazmierczak, 2003, Krippendorff and Butter, 2008, Medeiros, 2014) for understanding value in S-D logic (Vargo and Lusch, 2016). By integrating literature from design research and S-D logic, this paper provides a framework showing phenomenological interrelations between meaning and value. This conceptual framework posits that meaning frames value and the process of value cocreation through resource integration. On the one hand, meaning provides the interpretive lens through which resources become so they can be integrated into the value cocreation process. As presented in Figure 1, the main loop between meaning and value shows how meaning provides the interpretive lens for assessing the benefits resulting from value cocreation, framing value and affecting its idiosyncratic nature. Smaller loops, one between resource integration and meaning and another between resource integration and value, explain the supportive interpretative layers that lead to the overall understanding of the role of meaning. Therefore, three main contributions stem from the conceptualization of meaning for understanding value cocreation and service innovation.

First, meaning and its interpretative role contribute to advance a phenomenological understanding of value and value cocreation. Resource integration is central to how phenomenological value is cocreated (Kleinaltenkamp et al., 2012). Hence, meaning enriches the understanding of how resources become in the value cocreation process, through its role in resource interpretation. This answers Peters et al. (2014), who call for advancing the knowledge of resource integration by exploring how individuals create meaning while integrating resources. Due to the nature of resources which become through use, the interpretative role of meaning is crucial for resources to be recognized as such by an actor in a given situation. Meaning also enriches the phenomenological understanding of how value arises as an outcome for the beneficiary. Although value being phenomenologically determined by the beneficiary is an axiom of S-D logic (Vargo and Lusch, 2016) there is still a need for further research on an individual perspective of value cocreation (Saarijärvi et al., 2013). Sense-making activities and phenomenological aspects of value have been discussed in service research, especially with Helkkula et al. (2012b, 2018) conceptualizing value as experience. However, so far meaning has not been directly connected to value cocreation through the interpretative nature of resource integration, despite the call for research to explore the phenomenological aspect of value as experience (Tynan et al., 2014). Therefore, the main loop of the framework in Figure 1 emphasizes how meaning frames value and how value reinforces meaning in an ongoing interdependent dynamic. The literature on meaning from design research, especially the work of Krippendorff (1989, 2006), is seen as most relevant to understanding this dynamic because it is based on individual interpretation during interaction with artifacts of different complexity. By zooming in and bringing the focus to meaning, this framework also attempts to advance the understanding of value cocreation

necessary for its complexity that stems from many actors and possible contexts involved (Ostrom et al., 2015).

Second, by bringing new insights into the role of meaning in resource integration and value cocreation, and by integrating design-driven innovation research, this paper shows how viewing innovation as a change in meaning can provide a new perspective on service innovation. Changes in meaning can help in understanding innovation as recombination of novel resources (Lusch and Nambisan, 2015) by explaining that recombination occurs due to the changes in interpretation of previously known resources during value cocreation. As such, changing what resources mean opens up new possibilities for interpreting resources, recombining them in a new way, and resulting in new value cocreation. Also, changes in meaning focus on explaining newness and new value from a customer perspective, thus addressing the insufficient focus on what new value of service innovation is for the customer (Snyder et al., 2016, Witell et al., 2016). Therefore, it is contended that newness is an interpretative outcome of value cocreation process that depends on value framed by meaning.

Finally, the conceptual framework of the relationship between meaning and value integrates multidisciplinary perspectives from design research and S-D logic, contributing to advance service research as an interdisciplinary field (Gustafsson et al., 2016, Ostrom et al., 2015). The concept of meaning from design research can enrich phenomenological understanding of value cocreation and service innovation with its perspective on interaction and usage, acknowledging the importance of human activity in the process of interpretation and understanding.

Conclusion and future research

This paper builds a multidisciplinary framework, connecting meaning and value, enriching the understanding of value and value cocreation to conceptualize change in meaning as a new perspective on service innovation. Nevertheless, several limitations and future research direction need to be addressed. The conceptual framework presented in this paper is focused on meaning at the micro, individual level, contributing to the call for research on the phenomenological understanding of value. However, with the increased focus of S-D logic on ecosystem perspectives of value cocreation and service innovation (Koskela-Huotari et al., 2016), exploring the relevance of shared and collective meaning within this framework can expand our understanding of value cocreation at the meso and macro levels. Consumer culture theory explores the relevance of meaning on a more collective level (Arnould and Thompson, 2005) and how cultural meanings can become institutionalized (Peñaloza and Mish, 2011). Therefore, future research can explore the role of meaning at different levels of value cocreation (Beirão et al., 2017)

This paper is conceptual, developing a framework of the dynamics between meaning and value, to provide a new and integrative perspective of these concepts (MacInnis, 2011). Therefore, this conceptual framework is a first step that can be used empirically to explore this dynamic in different contexts. Viewing context as a boundary in framing the dynamics of meaning and value was highlighted in the paper, but the interplay between meaning, value, and context was not addressed in detail. Context is an important element in discussions of value cocreation and especially customer experience (Akaka et al., 2013, Akaka et al., 2015, Chandler and Vargo, 2011, Voss et al., 2016). As such, expanding this conceptual framework and studying the influence of context could provide a more fine-grained understanding of these dynamics.

Finally, this paper conceptualizes change in meaning as a new perspective on service innovation. However, as a conceptual paper, it does not address how this conceptualization can be operationalized so organizations can evolve their innovation processes to design for new value cocreation through changes in meaning. Although the initial inspiration for conceptualizing innovation as a change in meaning came from design-driven innovation (Verganti, 2008), adapting its product-based lens to service innovation requires further discussion and inquiries. Therefore, future research can explore how acknowledging the role of meaning in value cocreation can help in designing meaningful value propositions. Using empirical support and knowledge from design research on how to design platforms for meaning that enable multiple interpretations (Sengers and Gaver, 2006) might be a starting point for further empirical exploration, especially within service design.

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