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# Bridging design-driven and service innovation: Consonance and dissonance of meaning and value

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## Abstract

Conceptualization of meaning in design-driven innovation and value in service innovation, seem to be sharing some core characteristics that are essential but have not yet been integrated. Thus, this paper explores design-driven innovation and its conceptual relevance for service innovation within the framework of service-dominant logic (S-D logic) by examining interrelation between meaning and value. Design-driven innovation is defined as a strategic framework that enables radical innovation through change in meaning that emerges in interaction. Meaning as a concept is grounded in the human-centred design approach by Krippendorff (1989) who argued that people interact with artifacts because they make sense to them. On the other hand, S-D logic with its core concepts evolving around resource integration for value co-creation among multiple stakeholders, has become an increasingly important perspective to address complexities of service innovation. Also, S-D logic's concepts have found a common ground in theorizing about service design since value is seen as arising in use. Both meaning in design-driven and value in service innovation share some conceptual commonalities. By exploring and interrelating these two conceptual frameworks this paper aims to open new ways for understanding and operationalizing service innovation as well as evolve and strengthen the role of service design within it.

**KEYWORDS:** design-driven innovation, service innovation, meaning, value co-creation, S-D logic

## Introduction

Meaning in design has played an important role in understanding interaction and use of different artifacts due to its emerging, phenomenological and context-dependent nature. On the other hand, preoccupations of the nature and importance of value as arising in use and being phenomenological and context dependent has had an increasing relevance in service and management literature especially service-dominant logic (S-D logic). There seem to be

overlaps between meaning and value that have not yet been explored but could be relevant for understanding and operationalizing service innovation and leveraging the potential of service design within it.

Integrating design and management for innovation has resulted in a number of methodologies and frameworks, one of them being design-driven innovation. Design-driven innovation is gaining momentum and relevance in both design and management research, a strategic framework for achieving radical product innovation through the change in meaning (Verganti, 2008). This innovation framework integrates the notion of meaning from human-centred design literature (Krippendorff, 1989) to argue that change in meaning is a new radical innovation strategy different from both market-pull and technology-push (Norman & Verganti, 2014; Verganti, 2009). Design-driven innovation relies on organization's capabilities to innovate by changing the meaning of products where meaning is co-generated, context-dependent and emerges on both collective and personal level. Thus, the innovation of meaning is achieved through change in sociocultural models enabled by the firm's discourse with the network of professional stakeholders or key interpreters that can support it (ibid.). For example, Nintendo wii is often seen as an example of a product where meaning was changed from a game console to a platform for shared and interactive entertainment and is even applied as an aid in the healthcare sector (Verganti, 2008). However, design-driven innovation is still product and technology-oriented and predominantly researched within these contexts (Buganza et al., 2015; Rampino, 2011; Simoni et al., 2014; Verganti, 2003, 2009) while research focusing on specificities of service innovation is scarce (Takeyama et al., 2016). Nevertheless, meaning, as the main conceptual building block of design-driven innovation, brings forward interpretative qualities and understanding that for radical change one needs to actively interact with the network of stakeholders in an ongoing discourse and meaning co-generation. These aspects could be particularly relevant within the service-dominant logic (S-D logic) perspective on service innovation.

Service innovation has expanded the focus from an organization-driven stage in the new service development process to a more holistic and collaborative new value co-creation among many stakeholders, which is supported by the S-D logic framework. S-D logic, conceptually opposite to goods-dominant logic (G-D logic), posits that service is the basis of every exchange, and that based on provider's value propositions actors integrate their operant resources to co-create value (Vargo & Lusch, 2016). During the value co-creation, value-in-use emerges, which is always phenomenologically and idiosyncratically determined by the service beneficiary (Ibid.). S-D logic defines service innovation as the process of new value co-creation and resource recombination through meaningful value propositions (Lusch & Nambisan, 2015; Skålén et al., 2014). Thus, value co-creation is a key conceptual building block in S-D logic relevant for innovation. However, service innovation framed within S-D logic is sometimes difficult to operationalize both in terms of what constitutes innovation and how it occurs (Snyder et al., 2016).

Since some main concepts in design-driven innovation and S-D logic share interesting similarities, the purpose of this paper is to explore the interconnectedness of meaning and value co-creation that can inform and be relevant to service innovation. This will be done through the mapping of conceptual connections between design-driven and service innovation. By doing so, S-D logic and design-driven innovation can serve as a bridge for stronger penetration of meaning into the service innovation sphere on both theoretical and empirical level.

The paper is structured as follows. First, the authors give an overview of design-driven innovation explaining its main postulates. Second, a theoretical underpinning of service innovation and S-D logic is provided in order to understand their central concepts and challenges. Third, an analytical comparison between main building blocks of S-D logic and design-driven innovation is presented. Finally, a discussion is provided with the outline of main contributions and directions for future research.

## Design-driven innovation: integrating management and design research

Design-driven innovation is positioned as an innovation strategy that enables radical innovation of products and services through the change in meaning (Verganti, 2008). Meaning as a basic concept in design driven innovation comes from human-centred design and the work of Klaus Krippendorff. According to Krippendorff (1989, 2006), meaning is the essence of human-centred design where meaning arise through interaction with artifacts; an artifact's form follows its meaning and not its function. Hence people interact with artifacts because they have a meaning to them, and by interacting with them meaning is construed. This position asserts that neither the artefact or interaction, nor the meaning, is an objective signifier or something that is signified. Meaning is situated and based on a subjective account, where different subjects can share and understand the others account of meaning. However, to better understand the positioning of design-driven innovation necessary for future connections with the S-D logic and service innovation, both the management and design context of the framework need to be further examined.

Design-driven innovation deals with the radical change of meaning as a way to radically innovate and gain or sustain competitive advantage, an established concept in innovation management. This commonly used duality between radical and incremental represents the degree of change and originates from technological innovation research where the former has a significant impact on the market and can result in substantial competitive advantage (Abernathy & Clark, 1985; Chandy & Tellis, 2000). As Verganti (2009) points out, design-driven innovation as a strategy for radical change was inspired by a certain peculiarity he noticed, where long-term market and innovation success of Italian design was occurring due to the manufacturers and executives and not the designers employed. Verganti's (2008) empirical findings suggested that the innovation process seemed tacit and network-based, but came from specific capabilities that are not related only with the breakthrough technologies but also with meaning. One of the common examples he gives is Alessi's kitchen utensils line "Family follows fiction" which has radically innovated by changing the meaning; from plain and functional kitchen tools to fun and wondrous objects. However, the study of meaning related to the artifacts came from design practice that harboured a long term preoccupation with how designers make sense of things and facilitate interpretation (Jahnke, 2012). Particularly the works of Klaus Krippendorff on the role of meaning in design constitute the main building block of design-driven innovation.

### Characterizing meaning in design-driven innovation

Krippendorff (2006) has positioned meaning as a central concept in human-centred design that calls for a paradigmatic shift in a way designers not only design, but conceptualize artifacts. His work draws from various aspects of design theory and practice arguing for a change of the functionalist paradigm that relies on designers designing artifacts with particular function(s) in mind (*ibid.*). For designers to design in an increasingly complex world filled with complex artifacts, Krippendorff (2011) proposes new principles based on the six-level trajectory of artificiality that explains development of artifacts according to his changing paradigm; from products to discourses. This shift in the nature of artifacts is important to acknowledge because it broadens the scope of design practice, with designers having unique set of skills in dealing with their complexities. What enables the movement along this trajectory is the understanding of meaning or how people make sense of artifacts (*ibid.*), a design concept that is in the focus of design-driven innovation.

Meaning as a central concept of human-centred design represents a set of anticipated uses that arise in the interaction and are emergent in socio-cultural context and the situation in use (Krippendorff, 2006). More importantly, Krippendorff's human-centred paradigm gives users of the artifacts agency by arguing that it is impossible for designers to control meaning of their design, because users make sense of artifacts often unrelated to design's intention

(Krippendorff, 2008). This is also consistent to some of the criticism of user-centeredness coming from design literature that sees users merely as passive recipients of design solutions (Almquist & Lupton, 2009; Redström, 2006; Zurlo & Cautela, 2014). Although many discussions on meaning can be found in design (Almquist & Lupton, 2009; Desmet & Hekkert, 2007; Kazmierczak, 2003; Krippendorff & Butter, 2008; Medeiros, 2014), Krippendorff's conceptualization became the main building block of design-driven innovation where it is seen, as Verganti and Öberg (2013) point out, as co-generated between the actors, context-dependent and embedded in culture. With radical changes in meaning that design-driven innovation enables, the product moves away from its predominantly functional purpose and co-produces a new context with users (ibid.). Because new meaning as an output is always dependent not only on the context but on actors that are making sense of it, it cannot be optimized. This concept has also been advocated by other authors studying radical change of meaning in relation to technological innovation (Buganza et al., 2015, Dell'Era et al., 2010). Therefore, meaning in design-driven innovation is characterized by its emergence in interaction among key interpreters, context-dependency, inability to become optimized and ongoing construction in organizational and societal context.

### Operationalizing design-driven innovation

The framework of design-driven innovation follows the systematic process of listening, interpreting and addressing and includes a variety of interpreters or “sources”, not primarily users (Verganti, 2009). The departure from users as the primary interpreters in innovation process is important in order to understand where the capabilities of design-driven innovation come from. In design-driven innovation Verganti (2008) posits that:

*Radical changes in meanings instead ask for radical changes in sociocultural models, and this is something that might be understood (and affected) only by looking at long-term phenomena with a broader perspective. Design-driven innovation is therefore pushed by a firm's vision about possible breakthrough meanings and product languages that could emerge in the future (p. 438).*

Therefore, the change in meaning is facilitated through the sociocultural models that leverage on the network of external key interpreters who have an important role in design-driven innovation process. Their core capability is to influence the radical change of meaning through design discourse enabling them to envision the possible futures, which is something that could never been possible from the user research only. Therefore, organizations should look at the design discourse that emerges with key interpreters as a form of research where it is important to understand how people make sense of things as well as how emergence of radical new meaning can be facilitated (Verganti, 2009). Key interpreters can be users, but everyone that co-produces the socio-cultural world around the firm in which meaning emerges should be included (designers, technology suppliers, research and educational institutions, marketers, media, etc.). Thus, design-driven innovation differentiates from a user-centred approach in the sense that users should neither be the primary nor the only source of information to understand the meaning that can emerge and become relevant in the future.

Norman and Verganti (2014) also argue against the ability of human-centred design to facilitate radical innovation because of its focus on iteratively evaluating design through user involvement, and blindly using this as the decision space. Although this notion is not unknown in innovation literature, since user involvement and participation was often connected to only incremental and not radical innovation, some studies still show that involving users can be highly beneficial for innovation process (Ehn, 2008; Magnusson, 2009; von Hippel, 1986) including radical innovation (Lettl, 2007, Björgvinsson et al, 2012). However, human-centred perspective of Krippendorff should not be confused as equivalent to user-centred approach that design-driven innovation framework departs from. In discussing human-centred design and the role of meaning, Krippendorff (2008) is not merely user-centred. He emphasizes the necessity to bring stakeholders and their understanding into design process, and to design the artifacts to be redesignable. The later characteristic means

design becoming open for co-creation, which Krippendorff sees as truly design-driven as opposed to information-driven process. This co-creative nature of artifacts arising through meaning corresponds strongly with the value co-creation concept in S-D logic that will be presented in the following section.

The core empirical research of design-driven innovation, in the sense of Verganti, is focused on products, however some studies explored it in the context of service and service design (Takeyama et al., 2016). Nevertheless, further research is needed in connecting design-driven innovation with the specific context of service innovation on both theoretical and empirical level. This can help in bringing design-driven innovation more effectively into the service innovation context of S-D logic that acknowledges changing paradigm of service and is also relevant approach for theoretical development of service design (Wetter-Edman et al., 2014).

## Service innovation and S-D logic

Understanding the theoretical development of the service innovation field is necessary for positioning its latest advances within S-D logic framework. Service innovation developed from established innovation research investigating process advancements mainly in manufacturing. As research in service innovation was evolving, three distinctive perspectives on service innovation can be tracked. Coombs and Miles (2000) summarized them in the *assimilation*, *demarcation* and *synthesis* perspective, perspectives to which other researchers have added (see e.g. (Carlborg et al., 2013)). *The assimilation* perspective views services in the same way as manufacturing, disregarding that there are any particular differences between products and services, and with product and manufacturing as a prevailing focus. *The demarcation* perspective argued for clear distinction between services and manufacturing, mainly through the new service development (NSD) stance, which represented services as an internal process, insisting that this should be taken in consideration in research and that the same approach couldn't and shouldn't be employed for both products and services. *The synthesis* perspective integrates an innovation approach for both products and services stating that this perspective should be broad enough to include both. This development of service innovation is coherent not only with the shift towards the service economy, but also to the adoption of a service mindset that embraces active roles of service beneficiaries during the co-creation of value (Witell et al., 2016). Thus, the synthesis perspective on innovation found common grounds within the theoretical framework of S-D logic and its view that innovation entails integration of resource during new value co-creation process (Lusch & Nambisan, 2015). The synthesis perspective is also consistent with the view that service innovation should not just add value to organizations, but also to customers thus affecting different elements of service systems and subsequently affecting economic development (Drejer, 2004).

### Basics of the S-D logic

S-D logic moves away from differentiating between products and services and focuses instead on a service as a fundamental basis for exchange where the process of value co-creation is closely connected to resource integration between actors involved (Vargo & Lusch, 2016). Ever since its initial introduction in the service research as a new paradigm (Vargo & Lusch, 2004), S-D logic addressed different aspects of service research through its eleven fundamental premises (FP's) and axioms stating that service is fundamental basis of all exchange and that value is always co-created between actors. In the centre of S-D logic are thus the concepts of value and resources, where operant resources, representing actors' knowledge and skills, are seen as fundamental sources of strategic benefit through which value co-creation happens. Value thus arises in use (value-in-use) and is co-created by multiple actors coordinated by institutional arrangements (Vargo & Lusch, 2016). Value is also something that cannot be delivered by the actors and where service providers can only

offer value propositions that foster value co-creation (ibid.). Hence in order for value co-creation to happen, resources need to be integrated. Therefore, value that emerges in use during co-creation is dynamic, always idiosyncratically determined by the customer and context-dependent (Edvardsson et al., 2011; Grönroos & Voima, 2013). With its framework, S-D logic moves away from viewing customers as passive entities that consume value and where organizations add value through the operations in which service innovation is just a fragment of organization's development process (Edvardsson & Tronvoll, 2013). Instead, service-centeredness that S-D logic brings is inherently relational, acknowledging the fundamentally phenomenological and complex nature of value co-creation. As such, S-D logic is considered fairly congruent to theoretical developments in service design, although additional interpretative richness is found in service design practices (Wetter-Edman et al., 2014). To summarize, one of S-D logic fundamental premises is that value is co-created in use through integration of the resources among multiple actors, and has an idiosyncratic quality determined by the beneficiary. Value is also context-dependent and its co-creation is coordinated through institutional arrangement.

### Service innovation in S-D logic

The concepts of *value co-creation*, *resource integration* and *value propositions* are key building blocks of S-D logic relevant for understanding service innovation. A key to understanding service innovation is to understand how value co-creation occurs in service systems where meaningful value propositions lead to resource integration (Chae, 2012; Skälén et al., 2014; Spohrer & Maglio, 2008). The complexity of service lays in multiple actors that are involved in creating value propositions and are engaging in value co-creation within the entire service ecosystem (Chandler & Lusch, 2015, Koskela-Huotari et al., 2016, Vargo & Lusch, 2011). Thus, S-D logic focuses on the processes that are emergent and dynamic in explaining the nature of service. The emergent nature of service innovation happens because the interaction between service actors is unpredictable and constantly evolving (Chae, 2012). However, this emerging process-based focus can be challenging for operationalizing service innovation, especially relating to the degree of change (Snyder et al., 2016, Witell et al., 2016).

While service innovation has adopted dualities such as incremental and radical degree of change, a key issue in detecting them is the fact that the line between service innovation process and outcomes is often blurred. Many researches employing S-D logic therefore tend not to focus on radical vs. incremental innovation (Witell et al., 2016), and highlight the emergent nature of configurations of value co-creation (Holmlid et al, 2017). However, the relevant service innovation questions about what represents new value and to whom is this value new are important and still need further research (Witell et al., 2015). Avoiding to answer them makes operationalization of service innovation more difficult while addressing only degree of change can be insufficient in understanding what part of the offering truly represents innovation (Snyder et al., 2016). Nevertheless, with the design-driven innovation focused on new meaning as a way to achieve radical change, the following section will explore how the presented concepts interrelate and can possibly open up new spaces for contribution of service design to service innovation.

### Bridging design-driven and service innovation

The previous sections summarized literature-based genesis, nature and challenges of design-driven and service innovation explaining their main building blocks. In this section, both will be conceptually compared to investigate further possibilities for contributions in service innovation based on change in meaning. Design-driven innovation is a strategic firm-centred framework that highlights the radical change. Service innovation within S-D logic represents the new forms of value co-creation and resource integration. The comparison in this section

will cross-cut through main conceptual building blocks of innovation process and outcomes in both.

The main building block of design-driven innovation, the concept of meaning, shares some of the qualities with S-D logic on value and value co-creation. Therefore, to understand the similarities and differences of innovation process the comparison of meaning and value is presented. Table 1 summarizes the comparison based on the literature presented in previous sections.

**Table 1: Comparison of the main concepts**

Nature of meaning (design-driven innovation)	Nature of value (S-D logic)
<ul style="list-style-type: none"> <li>• Meaning emerges in interaction</li> <li>• There is no optimal meaning, it cannot be optimized or constant</li> <li>• Meanings are context dependent</li> <li>• Creation of meaning happens in interaction and reflection</li> <li>• Radical change in meaning is always co-generated among key interpreters</li> <li>• Meanings are constructed and re-constructed during ongoing societal and organizational processes</li> <li>• Meaning is intangible in nature</li> </ul>	<ul style="list-style-type: none"> <li>• Value is co-created in use through resource integration</li> <li>• Firms cannot embed value in their offering and deliver it</li> <li>• Value is context-dependent (value-in-context)</li> <li>• Value is always idiosyncratically determined by the service beneficiary</li> <li>• Value propositions are invitations for multiple actors to engage in value co-creation</li> <li>• Value is always co-created by multiple actors including beneficiary</li> <li>• Value co-creation is coordinated through institutional arrangements and institutions generated by actors</li> </ul>
Buganza et al., 2015, Dell’Era et.al., 2010, Krippendorff, 1989, 2006, Norman & Verganti, 2014, Verganti 2003, 2008, 2009, Verganti & Öberg, 2013,	Edvardsson et al. 2011, Edvardsson & Tronvoll, 2013, Grönroos & Voima, 2013, Mele et al. 2010, Skälén et al., 2014, Vargo & Lusch, 2004, 2008, 2011, 2016,

Table 1 shows that meaning arises in interaction and value arises in use. Value-in-use presupposes interaction therefore the point of emergence is the same. Further, meaning cannot be optimized while it is also impossible to embed value into product. Both characteristics come from the presumption that neither meaning nor value can be entirely controlled because they are always dependent on the actors who interact with them and make sense/co-create them. Both meaning and value are also context-dependent. Design-driven innovation states that radical change in meaning is co-generated among key interpreters while S-D logic posits value co-creation at its core around which multiple actors come together to integrate resources based on value propositions. Design-driven innovation as a radical change stems from interactions of key interpreters where focal firm needs to actively engage in participation and interpretation of design discourse, which is seen as a form of research. Therefore, the key interpreters have an active role in facilitating radical change in meaning. Both key interpreters and actors represent various stakeholders around the firm in question. Creation of meaning happens both in interaction and reflection, which means that it evolves both in personal and collective spheres. On the other hand, value is always phenomenologically determined by the beneficiary and value co-creation is facilitated through institutional arrangements. Based on this comparison, Figure 1 summarizes interrelation of basic concepts through five connectors: *interaction, context, institutional generation, emergence* and *idiosyncrasy*.

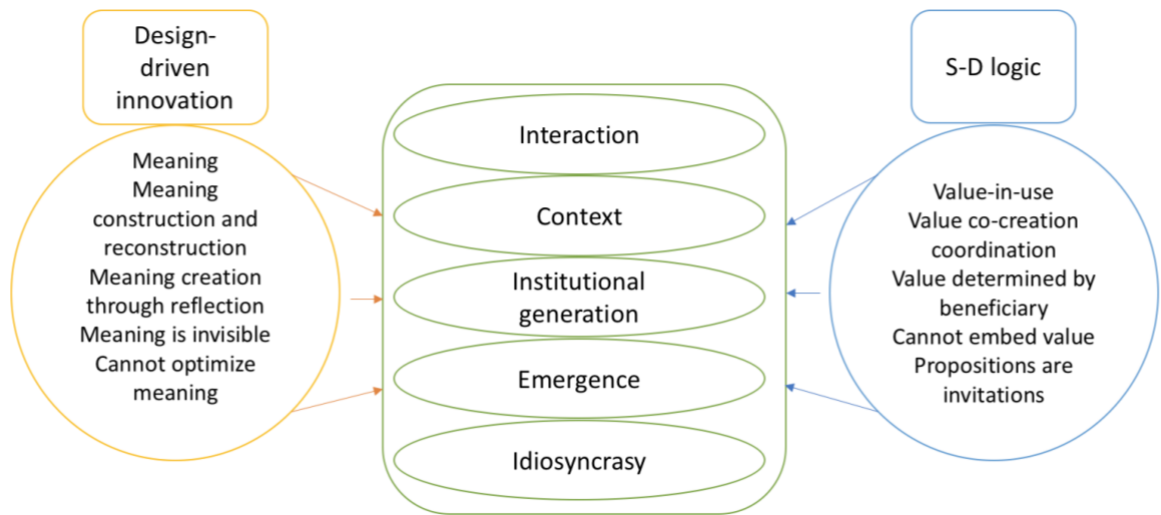


Figure 1: Connectors indicating interrelation

How these concepts as building blocks influence their related innovation processes is another important aspect to be considered. Simplified visualizations of both innovation processes serve to depict the basic relation between the central concept and other elements relevant for innovation process. Figure 2 shows the summary of design-driven innovation process that evolves and emerges around meaning. Network of key interpreters engage in design discourses that generate proposals for new radical meaning. If such change happens they also change socio-cultural models, which influence key interpreters. For the process of design-driven innovation, key interpreters are the most relevant element in innovation process that leads to radical innovation. They are often seen as focal firm's external network because of their capability to engage in discourses on possible futures, which are often unrelated to solving specific problems of the customer. The process of design-driven innovation, and its importance to radically change the meaning lies in analysing, interpreting and using discourses found among key interpreters, a process that can be seen as sequential.

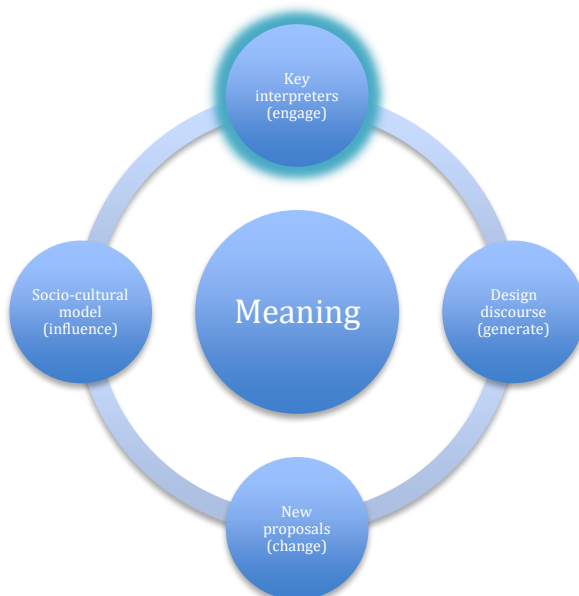


Figure 2: Summary of design-driven innovation process

On the other hand, service innovation evolves around actors engaging in resource integration based on value propositions to co-create value. Value co-creation is not only emergent in this process but also actively influenced by all the elements in the process



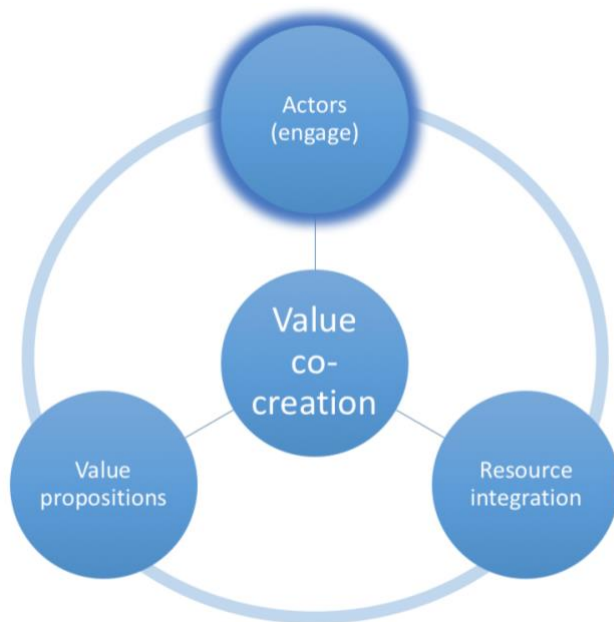


Figure 3: Connectors indicating interrelation

From the S-D logic perspective it is clear how the process of value co-creation integrates elements of service innovation. The precisely defined dynamic around co-creation includes many actors form a network, including beneficiaries. This dynamic reveals the complexity and interconnectedness of service systems and innovation processes within it. It also offers more nuanced view of elements in co-creation process that can be innovated, such as new value propositions and recombination of resources (Holmlid et al, 2017). However, another aspect of innovation process that is linked to the outcome of radical change needs to be mentioned. Both key interpreters in Figure 2 and actors in Figure 3 emphasize important elements relevant for achieving radical degree of change. Radical outcome of design-driven innovation lies in idea that network of external partners will have the power of sustaining and tacitly implying new possible meanings that could never be brought up in user-related research only. Key interpreters that belong to a wider external network are not just a knowledge source, but also a source for radical meaning creation. In S-D logic , a network-centric perspective of actors is common and all actors are seen as potential resource integrators, value co-creators and innovators. Therefore, both the interactions they choose to engage with and everything that such interactions encompass are relevant in the context of service innovation and radical change.

## Discussion

The comparison of the two concepts investigates whether there is a conceptual relationship between meaning in design-driven innovation and value in service innovation that can serve as a common ground for connecting these two concepts.

This can lay the basis for two important contributions. By understanding interrelations between value and meaning conceptual ground for evolving service design can be clarified and this represents the important step in leveraging service design for service innovation. The integration of the two concept can also serve as a starting point for operationalization of service innovation. On the other hand, the connection of value and meaning can inform design-driven innovation with stronger service logic necessary to deal with complexity of service innovation. The conceptual relationship between meaning and value exists and is portrayed in Table 1. The complementarity is seen in relevance of interaction, context,

phenomenological aspect of meaning/value determination, and impossibility to optimize/embed it into the offering or process. As Figure 1 additionally shows these connectors are summarized as interaction, context, institutional generation, emergence and idiosyncrasy. Based on the connectors it can be contended that meaning and value share important characteristics. Meaning and value both have peculiar nature which in practical terms can significantly challenge the need to control them, from either firms as collectives or designers as individuals. (Vargo & Lusch, 2016; Verganti 2009). Therefore, this conceptual overlap opens possibilities for future theoretical and empirical research of connectors relevant for service innovation through design-driven innovation. However, it cannot be said that either value or meaning can be substituted with one another as identical concepts. Although the nature of the concepts seems similar, there are differences in how each concept is explained that might not be the result of different terminology only.

In the centre of the design-driven innovation process presented in Figure 2 is meaning with its latent relations to all the elements of innovation process. The mere definition of design-driven innovation brings radical new meaning as an outcome of the innovation process. That is why the innovation process of design-driven innovation is sequential, although meaning has emergent qualities similar to conceptualization of value in S-D logic. On the other hand, the process of service innovation presented in Figure 3 is more explicitly emergent and relational. Because value co-creation is central to service innovation in general, and to radical service innovation as well (Edvardsson & Tronvoll, 2013; Perks et al., 2012) it reflects dependency on dynamics of actors, their resources and value propositions in a particular context. Enriching design-driven innovation with this relational and interconnected perspective of value co-creation can help steer its relevance towards the service context and strengthen the role of service design in service innovation.

Finally, the question of radical change in meaning as a form of service innovation needs to be addressed. A shift in meaning making, may render a value proposition obsolete. Radical innovation in design-driven innovation is always facilitated by meaning but primarily comes from firm's engagement with key interpreters, who have the power to push and change the meaning throughout the innovation process (Figure 2). Design-driven understanding of radical innovation is rooted in incremental/radical duality, which is seen as opposing. On the other hand, radical service innovation in S-D logic often stems from incremental innovation in the process of co-creation (Perks et al., 2012). Design-driven innovation is not appreciative of incremental user-centeredness in achieving radical innovation (Norman & Verganti, 2014). Krippendorff's (2008) human-centred design principles advocate giving control to the users by designing for redesigning (Ehn, 2008) or enabling what in S-D logic could be defined as value co-creation, a core concept of service innovation. Designing artifacts so that they serve as platforms or proposals for different users to "co-create" meaning is what is implied in this process of innovation. Seeing value co-creation as such a platform informed by meaning can become a valuable venue for further investigation in service innovation from S-D logic perspective, especially its operationalization. Nevertheless, for both design-driven and service innovation, key interpreters or actors have an important role in radical innovation outcome, which should be investigated further. Future research should also aim at widening the scope of meaning from other design-related literature for its further comparison with value.

## Conclusion

Meaning and value, are the two core concepts in design-driven and service innovation. However, their interrelatedness has not been extensively explored, although understanding interrelations between meaning and value can set the important ground for operationalization of service innovation through service design. Design-driven innovation uses change in meaning as inherently design principle to innovate and operationalizes it

through a process of listening, interpreting and addressing a network of key interpreters. However, translating it directly to service innovation framed in S-D logic might be challenging due to complex nature of service and lack of stronger connection to service logic. By dissecting, analysing and connecting meaning and value from design-driven innovation and service innovation using the S-D logic, authors believe that this bridge is possible. These similarities and detected connectors enable operational penetration of meaning into the service innovation sphere. This can also open new venues for service design contributions to service innovation. Nevertheless, further exploration of design literature on meaning can bring more nuanced approach in understanding how meaning can serve as a building block in service innovation.

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