J. of the Acad. Mark. Sci. (2013) 41:133–150
DOI 10.1007/s11747-012-0308-3

CONCEPTUAL/THEORETICAL PAPER

Critical service logic: making sense of value creation and co-creation

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Received: 29 November 2011 / Accepted: 13 June 2012 / Published online: 14 July 2012
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Abstract Because extant literature on the service logic of marketing is dominated by a metaphorical view of value co-creation, the roles of both service providers and customers remain analytically unspecified, without a theoretically sound foundation for value creation or co-creation. This article analyzes value creation and co-creation in service by analytically defining the roles of the customer and the firm, as well as the scope, locus, and nature of value and value creation. Value creation refers to customers' creation of value-in-use; co-creation is a function of interaction. Both the firm's and the customer's actions can be categorized by spheres (provider, joint, customer), and their interactions are either direct or indirect, leading to different forms of value creation and co-creation. This conceptualization of value creation spheres extends knowledge about how value-in-use emerges and how value creation can be managed; it also emphasizes the pivotal role of direct interactions for value co-creation opportunities.

Keywords Value creation · Value co-creation · Value spheres · Service logic · Service-dominant logic · Interaction · Marketing

Despite being recognized as key marketing concepts (e.g., Alderson 1957; AMA 2007; Drucker 1954; Rust and Oliver 1994; Sheth and Uslay 2007) and playing key roles in establishing the service perspective on marketing (Woodruff and Flint (2006), value creation and value co-creation have not been analyzed sufficiently rigorously. Even as the discussion of value has evolved from a goods-grounded to a service-grounded perspective (Vargo and Lusch 2008; Vargo et al. 2008), as Ballantyne et al. (2011) observe, "at this stage … fuzzy definitional problems associated with many of the terms used remains" (p. 203).

In particular, literature on the service-dominant logic[1] highlights that service ultimately must be experienced by the customer (Vargo and Lusch 2008), yet current marketing terminology (e.g., solution, service offering, value proposition) still implies the firm's dominant position for value creation (Strandvik et al. 2012). Recent service literature confirms that a consistent understanding of value and value co-creation remains missing. Furthermore, some researchers argue that it is not only the determination of value but also value creation that gets controlled by the customer (Grönroos 2011; Grönroos and Ravald 2011; Heinonen et al. 2010; Helkkula et al. 2012; Voima et al. 2010, 2011a). In this customer-grounded view, the value-in-use that emerges for the customer appears as a function of the customer's experiences and logic (Grönroos 2008; Grönroos and Ravald 2011; Heinonen et al. 2010; Helkkula et al. 2012; Strandvik et al. 2012; Voima et al. 2011a). Analyzing value creation and co-creation from the customer perspective thus might support a systematic, analytical definition of the scope, locus, and nature of value and its creation and co-creation. Moreover, as Heinonen et al. (2010) point out, a reverse perspective on co-creation may be required: Instead

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[1] Because it is a perspective on business and marketing that is not only dominated by service but also based on service, we prefer the term *service logic* (see Grönroos 2011). Service is the mental model or *dominant logic* (Prahalad and Bettis 1986) that guides the use of this perspective. The expression "service-dominant logic" confuses service as a perspective and the dominant logic concept. However, when referring to conventional literature on service logic, we use "service-dominant logic" or SDL.

of focusing on how customers can be engaged in co-creating with the firm, service providers should rather focus on becoming involved in the customers' lives.

Prior service marketing literature attributes the service provider's ability to influence customer value creation to co-creative interactions (Echeverri and Skålen 2011; Grönroos 2008; Prahalad and Ramaswamy 2004; Ramírez 1999). Prahalad and Ramaswamy (2004, p. 5) even claim that "the use of interaction as a basis for co-creation is at the crux of our emerging reality." In this view, co-creation functions by activating operant resources (Vargo and Lusch 2006), though no studies have clearly defined the roles of the service provider and the customer or the nature, scope, and locus of this value co-creation process.[2] To do so, it is necessary to consider the meaning of interaction and its separate roles when it is direct versus indirect.

Therefore, this article analyzes value creation in service by analytically defining value co-creation and value creation with a focus on the roles of the customer and the firm, then analyzing co-creation as a function of their interaction. With this approach, we can identify the spheres in which value is actually created, how, and by whom. However, we reject any implication that it is possible to base a theory of value creation and co-creation in the service logic on differing value concepts that appear in different contexts and at different parts of the value creation process. Rather, central concepts must be explicitly and clearly defined. In particular, though value for the customer and financial value for the firm are two sides of the value creation coin (Gupta and Lehmann 2005), we focus specifically on value creation for the customer (Grönroos 2008; Heinonen et al. 2010; Helkkula et al. 2012; Holbrook 2006; Strandvik et al. 2012). To avoid unnecessary complexity, we also do not emphasize the network context in which value creation often takes place (cf. Gummesson 2006).

To analyze value creation in detail though, we also need to address its expression. Most customer practices and experiences are everyday, mundane, sometimes even spontaneous activities, which may be more or less unconscious (Schatzki 1996; Thompson et al. 1989). Therefore, value creation might be described more accurately as value *emergence* or *formation* (e.g., Echeverri and Skålen 2011; Grönroos 2011; Korkman 2006; Voima et al. 2010). However, because of its widespread use and acceptance, we retain the term *value creation*.

With these approaches and expressions, this article makes three main contributions. First, we demonstrate that extant literature tends to emphasize multiple subjects' perception of value (e.g., provider's, customer's) but does not offer a clear conceptualization of how these actors contribute to the customer's experiences and consequently to perceptions of value-in-use. We systematically develop and present such a conceptualization by focusing on the roles of the service provider and the customer in value creation, as well as on the scope, locus, and nature of different phases of value creation. Second, this article introduces three value creation spheres and elaborates on the customer's and service provider's roles in each of them. Thus we present a structure for analyzing the customer's value creation and the service provider's value facilitation and co-creation opportunities. Third, this study addresses calls to conceptualize co-creation by analyzing co-creation as a function of interaction, as well as by defining the function and impact of direct and indirect forms of interaction in value creation.

In the next section, we review prior literature on value creation. Next we analyze the roles of the customer and service provider in value creation by conceptualizing different value spheres, after which we use the interaction concept to specify these roles of the customer and provider. The article concludes with a discussion of theoretical and managerial implications.

Theoretical background

Value is perhaps the most ill-defined and elusive concept in service marketing and management (Carú and Cova 2003; Sánchez-Fernández and Iniesta-Bonilla 2007; Woodall 2003). However, several attempts to create holistic conceptualizations of value have appeared (e.g., Khalifa 2004; Sánchez-Fernández and Iniesta-Bonilla 2007; Sánchez-Fernández et al. 2009; Woodall 2003), which generally conceptualize it on an individual level (Holbrook 1994, 1999), assess the trade-off between benefits and sacrifices (Day 1990; Woodruff and Gardial 1996; Zeithaml 1988), or use means-ends models (Gutman 1982; Howard 1977; Woodruff 1997; Zeithaml 1988). More recently, the common cognitive perspective has shifted to a more holistic and experiential perspective that recognizes value in the context of customer experiences (e.g., Heinonen and Strandvik 2009; Helkkula et al. 2012), as part of extended social systems (Edvardsson et al. 2011; Epp and Price 2011), or in the monetary gains created mutually by business partners (Grönroos and Helle 2010).

On a more general level, value creation entails a process that increases the customer's well-being, such that the user becomes better off in some respect (Grönroos 2008; cf. Nordin and Kowalkowski 2011; Vargo et al. 2008). Yet a service provider's actions also may make a customer worse off (e.g., Echeverri and Skålen 2011), which implies that a

[2] The co-creation concept appears in multiple firm-driven contexts, such as virtual (Füller 2010), learning (Desai 2010), product development, and innovation (Ramaswamy 2011; Rowley et al. 2007) contexts. We can observe a shift in how co-creation has been treated.

value creation process can take a negative turn. The notion of value-in-use as the extent to which a customer becomes better off could be analyzed on multiple dimensions, according to what "better off" means. Traditional views still assume that the provider controls value creation, such as by supporting the customer's peace of mind (Woodruff 1997), making life easier for the customer (Miller et al. 2002), solving a customer's problems (Sawhney et al. 2006), letting the customer achieve more than the sum of the individual components/resources (Brax and Jonsson 2009; Sawhney 2006), satisfying customer needs (Tuli et al. 2007), or simply relieving the customer of some responsibility (Normann and Ramirez 1993; Strandvik et al. 2012)

Strandvik et al. (2012) argue that customers do not assess individual sellers and products and services separately but instead consider how well they fit current or future products and services (and sellers) and what this match implies. Therefore, product and service interrelationships and product and service bundling (Harris and Blair 2006; Solomon and Buchanan 1991) are part of the logic customers adopt and affect their perception of value-in-use. This assertion suggests a resource integration view of the service-dominant logic (Vargo and Lusch 2004, 2008). As Solomon and Buchanan (1991) state, satisfaction with a product depends partly on its overall goodness of fit (see also Alderson 1957; Holbrook and Dixon 1985; Levy 1964; Vinson et al. 1977), which also may be more generally applicable. This view corresponds with Moran and Ghoshal's (1999, p. 409) observation that "it is not resources per se, but the ability to access, deploy, exchange, and combine them that lies at the heart of value creation," where the customer's needs (Strandvik et al. 2012), internal linkages (Edvardsson et al. 2011), relational goals (Epp and Price 2011), roles (Vargo and Lusch 2011), networks (Gummesson 2006), and ecosystems (Voima et al. 2011b) all have importance for understanding their resource integration and creation of value-in-use.

When value is perceived as *value-in-use for the customer*, the focus is no longer predominantly on a customized bundle of products or services exchanged for a price. Instead, value creation becomes an ongoing process that emphasizes the customer's experiences, logic, and ability to extract value out of products and other resources used (create value-in-use). Nordin and Kowalkowski (2010) stress that the customer focuses on not only functional and economic benefits but also emotional, social, ethical, and environmental dimensions (Barnes 2003; Norman and MacDonald 2004). The central element of value-in-use for the customer connects to the temporal dimension, because value is created through the customer's usage over time (Helkkula and Kelleher 2010; Sawhney et al. 2006; Strandvik et al. 2012; Tuli et al. 2007). Holbrook (2006, p. 212) also emphasizes the customer's perspective but defines value as an "interactive relativistic preference experience." Echeverri and Skålen (2011) argue that this definition makes value a function of the interaction between subjects (or between subject and object), which is personal and contextual, depends on affections, attitudes, satisfaction, or behaviorally based judgments, and resides in the user's consumption or use experience.

When conceptualizing value creation and asking what value is, along with where, how, by whom, and when it is created, the complexity of the value concept becomes clearly evident (Voima et al. 2010). For one person, a vacation may create value, whereas for someone else, value relates to the possibility of meeting friends, as enabled by the vacation. Another person may experience value already in the process of dreaming about the vacation or when planning the trip; for yet another person, the memories, new friendships, and cultural experiences and learning processes achieved during the vacation are the sources of value (Heinonen et al. 2010; Voima et al. 2010).

Defining value creation

Although value creation is not explicitly defined, extant literature on SDL generally treats it as co-creation, in that it emphasizes a process that includes actions by both the service provider and customer (and possibly other actors). Therefore, according to this literature both the service provider and the customer are always considered co-creators of value. Although value creation is never explicitly defined, the notion that all actors, customers, and firms alike co-create value makes value creation an all-encompassing process, without any distinctions between, for example, the service provider's and the customer's roles and actions in that process (Grönroos 2008, 2011; Grönroos and Ravald 2011). Whereas early production-oriented perspectives emphasized value delivery (value embedded in products exchanged for money or money's worth), more recent service-oriented research relies on value-in-use (Grönroos 2008; Holbrook 1994; Normann 2001; Prahalad 2004; Ravald and Grönroos 1996; Vandermerwe 1996; Vargo and Lusch 2004, 2008; Wikström 1996). Moreover, despite widespread acceptance of the idea of value as "perceived and determined by the customer on the basis of value-in-use" (Vargo and Lusch 2004, p. 7), treating value creation as an all-encompassing process leaves the underlying *locus* of value unclear. It cannot be value-in-exchange, because the customer's actions during usage are involved. It cannot be value-in-use, because the service provider's activities are involved. For the same reason, the nature of value is unclear. As schematically illustrated in Fig. 1, the nature of value-in-exchange is a utility, based on value embedded in a resource and as an output of a labor process, that exists as a singular

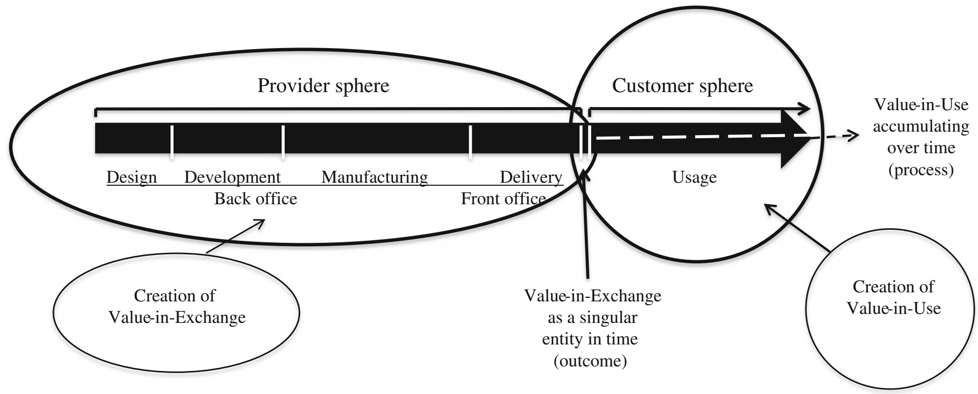


Fig. 1 A comparison of the nature and locus of the value-in-use and value-in-exchange concepts

entity at a given point of time and can be exchanged for other utilities (or for which the customer is prepared to pay). The nature of value-in-use instead is the extent to which a customer feels better off (positive value) or worse off (negative value) through experiences somehow related to consumption. Value thus accumulates over time through experiences during usage (Grönroos 2008, 2011; compare the user-driven view on customer solutions in Tuli et al. 2007). Yet logically, value as value-in-use cannot exist before it is created (or emerges) from the usage process, where it is accumulating, and therefore cannot be assessed before usage.

The value creation process by the customer is not linear, nor does it automatically follow the provider's activities. Although for simplicity Fig. 1 implies linearity, the provider and customer spheres actually can occur in almost any order and sequence. For example, dreaming about a new car may be part of the value creation process before the new car even gets ordered or manufactured. Value-in-use is customer driven and accumulates over time in the customer's sphere, which means that value is created in different spatial and temporal settings (Heinonen et al. 2010; Helkkula et al. 2012; Voima et al. 2010, 2011a). Furthermore, value-in-exchange does not necessarily exist in one given point in time but instead can exist as multiple singular entities. A family vacation may include multiple choices (purchases) at different points during the vacation, where potential value exists in each purchase situation, as multiple, singular entities embedded in the products or services considered.

However, if value is an all-encompassing process, including both provider and customer activities, ontological problems arise. Without a definition of the ontological basis of value creation, value must be treated as a concept that can be perceived and constructed differently by various actors (e.g., provider and customer). With these conflicting ideas as a foundation, it is impossible to describe the *nature* of value. Therefore, this definition of value creation cannot offer theoretical or managerial implications about the roles and scope of the service provider or the customer.

The conventional treatment of value creation and co-creation in publications related to the service perspective places the firm in control of value creation, and the customer may join the process as a co-creator. This provider emphasis first emerged in customer engagement literature (e.g., Berry and Parasuraman 1991; Heskett et al. 2002; Peppers and Rogers 1993; Pine and Gilmore 1999; Prahalad 2004; Rust et al. 1996; Vargo and Lusch 2004; Zeithaml 1990; for a discussion of the co-creation phenomenon, see Cova et al. 2011), where the role of the customer evolved from self-service, through firm-scripted staging of customer experiences, to co-designing and finally co-production of service (Prahalad 2004; Vargo and Lusch 2004). In the ultimate joint production perspective, the company "invents value by enabling customers' own value-creation activities" (Normann and Ramirez 1993, p. 67; compare their *value constellation* concept). Here co-creation metaphorically denotes mutual value creation. As Ramaswamy (2011, p. 195, emphasis in original) observes in an analysis of co-creation in management literature, "*co-creation* is the process by which *mutual value* is expanded together." Some of this expansion may reflect true co-creation activities in direct dyadic interactions, but parts of it may be based on independent activities by the parties in a business engagement, where the focus is on the mutuality of value creation. This metaphorical co-creation term has been adopted in SDL literature, and as long as a phenomenon is discussed in general, unspecified terms, metaphorical concepts work. However, when the discussion moves to an analytical level, metaphorical descriptions are difficult to apply. Analytical concepts have to be introduced.

Logically, value creation as an all-encompassing process contradicts the marketing concept, according to which the point of origin and core is the customer (e.g., Keith 1960; Levitt 1960; McKitterick 1957; Romilla 1916). From this customer-centric perspective, marketing is "a process of adapting an organization to meet the needs of customers" (Brennan et al. 2003, p. 1638), or as McKitterick (1957, p. 78) formulates it in his seminal paper: "the principle task of the marketing function [is] to be skillful in conceiving and then making the business do what suits the interests of the customer." As also suggested by the value-in-use concept, customers are in charge of value, so including value creation as an all-encompassing process and value-in-use in the same analysis creates a logical flaw.

In Fig. 2, we illustrate that when value is defined solely as value-in-use, the comprehensive production process (e.g., design, development and manufacturing of resources, back office) is not part of value creation (Grönroos 2008, 2011; Grönroos and Ravald 2011). Only in certain circumstances, when the customer becomes involved in production-related activities, can such activities join value creation. For the customer, the production of resources generates only *potential value*. Through use, value actualization (Gummesson 2007) takes place, and he or she experiences real value (Vargo and Lusch 2011). Either of the value creation approaches illustrated in Fig. 2 may be used separately, but not together or in overlap. Depending on the definition of value creation, the co-creation concept implies different meanings. When viewing value creation as an all-encompassing process, co-creation becomes a metaphor—everything is co-creation, everybody co-creates—that does not allow for further analytical developments. Instead, as we will demonstrate, defining value creation as the customer's creation of value-in-use can produce a structure of value co-creation that is meaningful for further theoretical and practical elaborations.

Value as the customer's creation of value-in-use

When firms and customers are considered always value co-creators, current approaches cannot clarify the relative importance of each party, their roles in the overall process, or what the actual processes of value creation or value co-creation are (Grönroos and Ravald 2011). Moreover, it is not possible to describe the nature of value created in an all-encompassing value creation process. Value creation in this case helps explain only that value is not created by the firm alone, as management literature has established (e.g., Normann and Ramirez 1993), and that actions taken by the customer affect the value being created, such that they take an equal part in the value-creating process. Beyond that, the explanatory power is low. Moreover, from a value-in-use perspective, the conclusion is problematic. Value cannot be created *both* by the firm and the customer, *and* by the customer alone.

Following the meaning of the value-in-use notion, we adopt a phenomenological perspective and state that value creation is the customer's creation of value-in-use during usage, where value is socially constructed through experiences (Berger and Luckmann 1966; Edvardsson et al. 2011; Ramaswamy 2011; Thompson et al. 1989). Different authors explore alternative ways to formulate this phenomenon. Recently value has been recognized as created in context (Chandler and Vargo 2011; Vargo 2008), in social contexts (Edvardsson et al. 2011), in practice (Holttinen 2010; Korkman 2006), or in experience (Helkkula et al. 2012; Ramaswamy 2011; Voima et al. 2010).

The important role of the customer has also been recognized in SDL literature, as indicated in statements such as customers are always a co-creators of value (Vargo and Lusch 2004, 2008) and "activity is best understood in terms of *input* for the *customers' resource-integrating, value-creation activities* rather than it is in terms of its [the firm's] *own integration of customer resources for the 'production' of valuable output*" (Vargo 2008, p. 214; italics in original). However, the customer's creation of value-in-use has not been analyzed in further detail.

Recently the scope of value creation has been studied more closely as part of the customer's life (Heinonen et al. 2010; Helkkula et al. 2012). Users' accumulated experiences (individual and social) with resources, processes (and/or their outcomes), and contexts thus are the core of value creation, and value-in-use not only accumulates from past and current experience but also can be envisioned in future experiences (Helkkula et al. 2012; Voima et al. 2010). The customer integrates resources and processes from a firm with the resources and processes from other firms and/or actors, depending on his or her individual, relational, and collective goals (Epp and Price 2011). For example, a car cannot be driven, and a person cannot extract value out of using the car, without access to gasoline, and without the

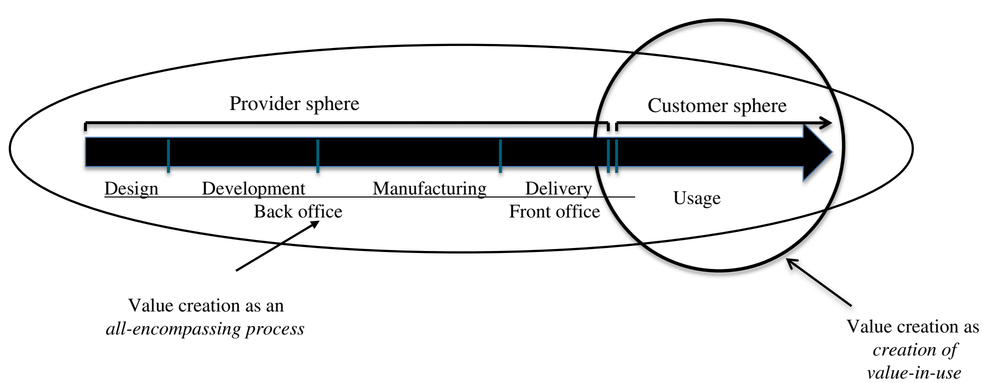


Fig. 2 Value creation as the customer's creation of value in-use vs. as an all-encompassing process including provider and customer activities (Source: C. Grönroos (2011). Value co-creation in service logic: a critical analysis. *Marketing Theory* 11 (3), p. 283.)

combination of at least these resources value-in-use cannot emerge from driving the car. Value emerges through the physical or mental use of these resources, and sometimes even from possession of them, so the process of usage is the defining concept. In our analysis, the context—whether social, physical, temporal, and/or spatial—*determines the experience of value-in-use*.

From an axiological perspective, Mattsson (1991, p. 42; see also, for example, Lamont 1955) suggests that "value patterns are the effects of an on-going evaluative act by a consumer on being exposed to a product." And already according to Aristotle's *value theory* value-in-use is a subjectively experienced benefit derived from a thing's or a service's capacity of being productive of a person's good, where demand is a function of value-in-use, and value-in-exchange is derived from value-in-use (Gordon 1964, p. 117–118). Value creation may take place on different levels of consciousness, where becoming "better off" (or "worse off") may occur in different ways (imagined before, perceived during, or evaluated after) in the experiential use process (Ng et al. 2010). Sometimes value is literally created (e.g., driving from one place to another); sometimes it just emerges for the customer (e.g., a feeling of freedom when driving around) (cf. Korkman 2006).[3]

Value-in-use implies that the customer, as the user, creates value and is *the* value creator, not just that he or she assesses or determines value. The customer creates and assesses value in a longitudinal and experiential process of usage. Therefore, in the same way that the firm controls the production process and can invite the customer to join it as a co-producer of resources (e.g., Eiglier and Langeard 1975), the customer controls the experiential value creation process and may invite the service provider to join this process as a co-creator of value. For our analytical purposes, we use co-creation to denote the joint process whereby firms and customers together (or customers with other actors), in interactions, create value.

In summary, value creation during usage is a longitudinal, dynamic, experiential process that may include both construction and destruction phases (Echeverri and Skålen 2011) in different social and physical as well as temporal and spatial settings (Helkkula et al. 2012; Voima et al. 2010), where the user is the one experiencing the process in an individual or social context. Value emerging in the experience may be individually intrasubjective and socially intersubjective (Helkkula et al. 2012). Customers construct potential or future service experiences from multiple different sources, such as from their own imagination or stories told by others (Meyer and Schwager 2007). If we fail to recognize the role of the customer as the creator or constructor of value, the role of the firm grows out of proportion, reverting the evolution away from value-in-use and users as the creators of value, toward value-in-exchange and value for customers being embedded in producer outputs (e.g., products).

To analyze the user's and the service provider's various actions in the creation of value-in-use, we discuss the scope, locus, and nature of value and value creation next, as summarized in Table 1.

As Table 1 shows, when value creation refers to the customer's creation of value-in-use, the customer is a value creator. The *scope* of value creation shifts from a provider-driven, all-encompassing process to a customer-driven process. Value is created in the user's accumulated experiences (individual and collective/social) with resources, processes, and/or their outcomes and contexts accumulating from past, current, and envisioned future experiences in the customer's life (Helkkula et al. 2012; Voima et al. 2010).[4] The *locus* of value creation is the customer's physical, mental, or possessive activities, practices, and experiences in multiple individual and social contexts. Value is therefore realized through possession, usage, or mental states (Grönroos and Ravald 2011; Heinonen et al. 2010). The customer experiences value by becoming better or worse off over time during the accumulating process, and value creation becomes a structured process in which firms and customers have defined roles and goals (*nature* of value creation). When the customer creates value through experiences in an accumulating process, the firm as a service provider may facilitate the customer's value creation by producing and delivering resources and processes that represent potential value, or expected value-in-use, for the customer. As Normann and Ramirez (1988, p. 116) noted, "… the role (or roles) that the seller plays in helping customers to create value for themselves" is a defining aspect of a service perspective or logic. The customer is the one who constructs and experiences value by integrating resources/processes/outcomes in his or her own social context. In conclusion, the customer is the value creator, and a firm facilitates value for its customers.[5] Of course, the role of the firm in a customer's value creation is not unimportant. Facilitating

[3] Although the experiential value creation process is embedded in the constantly evolving context, expressions such as "value-in-context" (Chandler and Vargo 2011) only describe what influences the way value-in-use emerges or is created. They cannot replace value-in-use as the fundamental concept. Value-in-use is grounded in the view of value as a utility, which emerges for the user during a consumption process (see Becker 1965). Therefore, we use value-in-use as the theoretically best description of a situation in which value emerges for or is created by the customer in a temporally fluctuating, accumulating experience process during use (resource/outcome integration).

[4] Although the expression "accumulated experiences" seems to imply a constantly positively evolving level of value, obviously the value accumulation process may include both positive and negative value experiences, where at times the customer may also become worse off and not constantly better off.

[5] Value is of course also created for the firm. However, in the present analysis we discuss only how value is created for the customer.

Table 1 Value as customer's creation of value-in-use

	Value creation	Value	Connection to previous contributions
Role	The customer is the value creator/constructor	Customer's experience of value-in-use	Customer's role in value creation, customer dominance: Grönroos 2008; Grönroos and Ravald 2011; Voima et al. 2010, 2011a, b; Strandvik et al. 2012; Vargo and Lusch 2004, 2008 (value-in-use)
Scope	The user's accumulated experiences (individual and collective/social) with resources, processes (and/or their outcomes) and contexts	Value-in-use accumulating from past, current, and future experiences	Value as socially constructed/accumulated in life, being temporally fluctuating (past, present, future): Thompson et al. 1989; Grönroos 2011; Heinonen et al. 2010; Voima et al. 2010, 2011a; Helkkula et al. 2012
Locus	Defines the locus of value creation as the customer's physical, mental, or possessive activities, practices, and experiences in multiple individual and collective social contexts	Possession, usage, mental/imagined states	Recognition of invisible, mental, imagined actions/experiences: Heinonen et al. 2010 Helkkula et al. 2012 Voima et al. 2010, 2011a, b Value creation/formation in customer networks and ecosystems: Vargo and Lusch 2008; Epp and Price 2010; Helkkula et al. 2012; Voima et al. 2011a
Nature	A structured but evolving process where firms and customers have specified roles and goals	The degree of becoming better/worse off experienced by the customer (temporally fluctuating)	Customer/provider roles: Grönroos and Ravald 2011; Grönroos 2008, 2011; Strandvik et al. 2012 Temporally fluctuating experiential process: Helkkula and Kelleher 2010; Helkkula et al. 2012; Voima et al. 2010, 2011a; Grönroos and Ravald 2011 Helkkula et al. 2012 Heinonen et al. 2010 Voima et al. 2010, 2011a, b
Implications	Theoretical and managerial implications are possible. The customer creates value and the firm as a service provider facilitates customers' value creation. Direct interactions enable firms to co-create value with their customers.	Theoretical and managerial implications are possible. The customer creates value through past, current, and/or imagined future experiences in a temporally fluctuating individually and socially accumulated process. The firm produces resources and processes that represent potential or expected value-in-use.	

value for customers means that the firm creates potential value that the customer can transform to value-in-use or real value (value actualization; see Gummesson 2007).

From an analytical point of view, if the customer creates value-in-use, who actually co-creates value, and when and where does this co-creation take place? Analytical analyses of value co-creation is mostly lacking in the service literature (with Payne et al. 2008 as a notable exception; see also Storbacka et al. 2012). Value co-creation should be analyzed on the basis of the roles of the customer and the firm and in recognition of the *value spheres* that encompass the provider and the customer. If the system is closed to the customer, co-production cannot take place in the production process. Nor can value co-creation take place if the customer's process is closed to the provider. In both cases, we would find no joint activities, and no co-creation is possible. Co-creation occurs only when two or more parties influence each other or, using service marketing terminology, interact. We therefore discuss the interaction phenomenon and its implications for value spheres next.

Interaction and value creation

In marketing, interactions have been studied mostly in the context of buyer–seller relationships and in interaction and network models (Håkansson 1982; Håkansson and Snehota 1995). Interactions are central concepts also in industrial contexts, branding research, information process research, firm performance research, and consumer culture theory (e.g., Arnould and Thompson 2005; Fyrberg and Jüriado 2009; Homburg et al. 2009). Furthermore, the interaction concept offers a key construct in service marketing associated with buyer–seller interactions (Gummesson 1991), interactive marketing (Grönroos 1984), interaction quality (Lehtinen and Lehtinen 1991), and part-time marketers (Gummesson 1991). The implications of interaction for how value emerges for customers also have been emphasized recently in a practice-based study (Echeverri and Skålen 2011) that supports the definition of interaction we use, namely, that interactions are situations in which the interacting parties are involved in each other's practices (see also Grönroos and Ravald 2011). The core of interaction is a physical, virtual, or mental contact, such that the provider creates opportunities to engage with its customers' experiences and practices and thereby influences their flow and outcomes. Opportunities for interacting are natural in service encounters but may be created in goods marketing contexts too, such as through order taking, logistics, problem diagnosing, and call centers.

Interaction is a dialogical process (Ballantyne 2004; Ballantyne and Varey 2006). Customer and provider processes merge into a coordinated, interactive process in which both actors are active (Grönroos and Ravald 2011), such as when a customer orders a vacation from a tour operator. In direct interactions, the processes are simultaneous and intertwined. Both parties can actively influence this process, a conclusion supported by a recently reported study of process and outcome interdependencies in service encounters (Ma and Dubé 2011). For example, when a customer asks if it is possible to upgrade a hotel room or rent a car with children's car seats, he or she directly influences the service provider's production process. Through its actions, the service provider simultaneously can influence the customer's value creation process. If the tour operator easily arranges the upgrade or a suitable car, positive value accumulation probably takes place. If the tour operator explains that the change is not possible, value may be destroyed for the customer. Thus the role of the customer and the provider in value creation and co-creation depend on the sphere in which potential and real value are being created. Only in a joint sphere is co-creation of value between the firm and the customer possible.

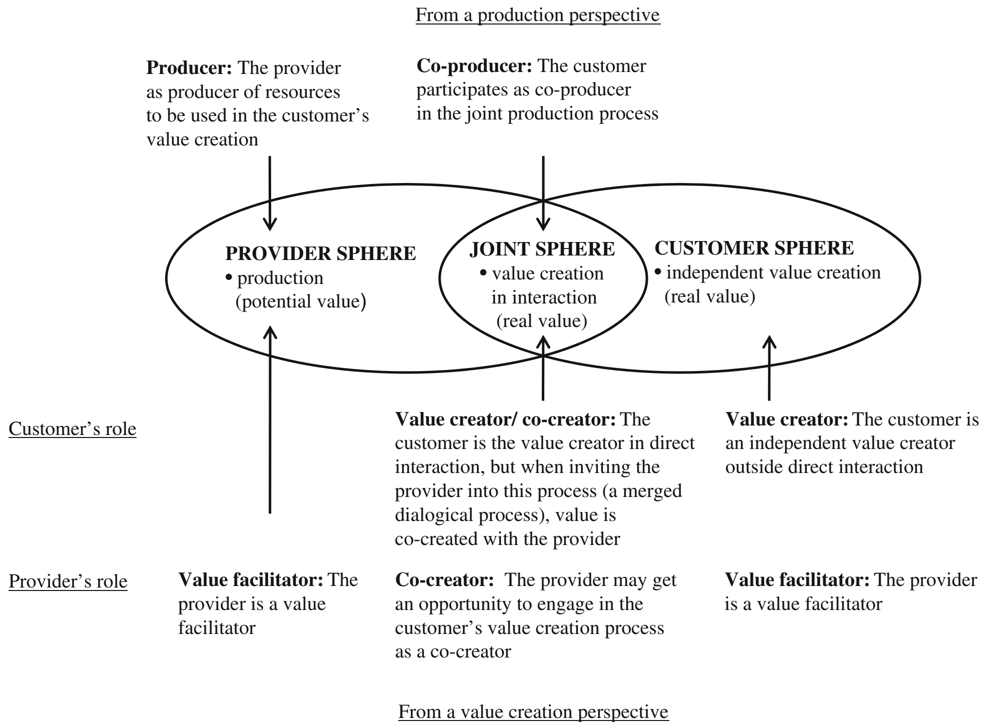
Regarding the two parties' different roles in the interaction, the customer acts as a co-producer (co-designer, co-developer) in the firm's production process, such that the customer is a resource in the firm's production process. The customer's value-creating process is closed to the firm (Grönroos and Ravald 2011), but because the interaction potentially enables a merged, coordinated process (not two separate, parallel processes), it may provide the firm with access to the customer's sphere. In this joint sphere, the firm has an opportunity to influence the customer's experiences and practices during usage. For example, the tour operator may suggest a bigger hotel room with a separate kitchen that would be more suitable for a family with small children. Because value is created in usage, interactions make the value creation process potentially accessible to the provider. If the service provider manages to make use of this opportunity, it may take part in the customer's value creation process as a co-creator.

Value creation spheres

Figure 3 illustrates how the roles of the firm and customer vary, depending on the value creation sphere. The firm is responsible for the production process (used as a global term for design, development, manufacturing, delivery, back-office, and front-office processes), and in the *provider sphere* it produces resources and processes for customers' use. In this way the firm facilitates customers' value creation. By providing potential value-in-use, the firm can be characterized as a *value facilitator* (Grönroos 2008, 2011). In the *joint sphere*, the role of the customer is twofold: co-producer of resources and processes with the firm *and* value creator jointly with the firm. In direct interactions with the customer, the firm may have an opportunity to engage with the customer's value creation process and take on the role of value co-creator. In the rest of the *customer sphere*, which is closed to the provider, the customer creates value as value-in-use independently of the provider. No direct interactions exist and no co-creation takes place.

Again, the process is not necessarily as linear as the figure implies. Value may be created in the different spheres at different periods of time and reflect spatial heterogeneity. The different value spheres may follow in different sequences and form different value creation patterns. Although value facilitation normally precedes value creation experiences, an active customer may give input as a co-developer or co-designer, or even as a co-manufacturer. Then the joint sphere widens, and the whole process starts directly in the joint value sphere. For example, value creation for the customer may begin through a joint development process, which then represents a value co-creation opportunity for the firm. Next, we discuss the three value spheres in some detail.

Fig. 3 Value creation spheres



Provider sphere

The provider sphere generates potential value, which customers later turn into real value (-in-use). Activities performed by the firm in this sphere facilitate the customer's value creation. The firm is in charge of these processes, which can take different physical and virtual forms. Therefore, the role of the firm in the provider sphere is fundamentally to perform as a value facilitator (Grönroos 2011). Value facilitation is not part of value creation (of value-in-use). Rather, activities performed by the provider (i.e., production) result in outputs (potential value) that customers may use in their value creation process.

Joint sphere

Interaction makes value creation a dialogical process, which Wikström (1996) refers to as value-in-interactions. According to the value-in-use concept, the customer is in charge of value creation in the joint sphere, but through the dialogical process of direct interaction, the provider may influence the customer's value creation process and serve as a co-creator. Co-creation can take place only through direct interactions. If there are no direct interactions, no value co-creation is possible (Grönroos 2011; Grönroos and Ravald 2011). However, interactions are not an automatic shortcut to getting access to customer value creation; instead, they form a *platform* for joint co-creation of value. The firm's engagement with customer interactions may influence the customer's value creation positively and negatively, or no influence may occur. If the firm, uninvited by the customer, creates interactions (e.g., calls the customer), the risk for value destruction always exists and may increase, because it is difficult for the firm to know in what situation and mental state the customer is at that specific moment.

Echeverri and Skålen (2011) emphasize that the interactive value formation process in which the customer and the firm are involved jointly may be a creative but also a destructive process. The quality of the interactions becomes fundamental for customer value creation (Fyrberg and Jüriado 2009), as does the firm's understanding of the customer's independent value creation outside the direct interaction (Voima et al. 2011b). By understanding the customer's practices and how the customer combines resources, processes, and outcomes in interactions, the service provider shifts from a mere facilitator to a co-creator of value. Therefore, as Gummesson (1991) points out, the firm's employees, who communicate and interact with the customer, have a crucial role as *part-time marketers*.

The effective management of customer interactions requires the firm to learn more about the customer and his or her individual and collective context, which influences the value creation process in the joint sphere, as well as in the customer sphere (cf. Voima et al. 2011b). The different value spheres are dynamic. The provider may invite the customer to join as a co-producer (co-designer, co-developer) at different points of the production process, which broadens the joint sphere and enables co-creation of value. The customer may also become active and cross the boundary into the provider sphere. This moves the boundaries of the joint sphere and creates a broader interaction platform, thus providing the firm with new joint value co-creation opportunities (a broadened value co-creation platform). For example, a customer may call an upper-level manager about a service failure. Depending on how the manager handles this situation as an expanded joint value sphere, the customer's value creation may take either a favorable or a destructive turn.

Conversely, the firm may expand the joint sphere, such as by creating direct interactions with customers (e.g., call centers). In these cases, the two ellipses in Fig. 2 move toward each other, increasing the joint sphere and the possibilities for the firm to co-create value with the customer. When direct interactions occur at an early stage, for example during product and service development and design processes, the joint sphere may dominate value creation. In other situations, virtually no direct interactions occur, and value (-in-use) is created mostly in the customer sphere, as the customer's independent value creation. In such situations, the firm is mostly or only a value facilitator, providing potential value to customers. To conclude, in the joint sphere, the customer is in charge of value creation (value-in-use), but through a dialogical process of direct interactions, the provider may gain an opportunity to influence the customer's value creation process as a value co-creator.

Customer sphere

In the context of value creation, the customer sphere traditionally has been ignored. The role of the provider has been emphasized, which was natural when value was regarded as a function of activities controlled by the firm (value embedded in producer outputs). However, lately the importance of the customer sphere has been better recognized (Epp and Price 2011; Grönroos 2008; Heinonen et al. 2010; Voima et al. 2010; Vargo and Lusch 2004, 2008; cf. Holbrook 1994; Vandermerwe 1996; Woodruff and Gardial 1996). Grönroos (2008, 2011) refers to value creation in the customer sphere as *sole* or *independent* value creation, emphasizing that during this phase, value creation by the customer is independent of the provider. Because the system is closed to the provider, the provider plays a passive role in the customer sphere. In independent value creation, the customer only interacts with resources obtained from the firm, whether physical, virtual, mental, or imaginary—but not with the firm's processes.

Independent value creation may take several forms in multiple temporal, spatial, physical, and social customer contexts, and it can encompass both individual and collective levels (Epp and Price 2011; Voima et al. 2010, 2011b). The customer independently combines different resources to make value creation possible, and the way the customer integrates resources depends on the context. In value creation, the customer may have individual, relational, and collective goals (cf. Epp and Price 2011). The customer's value creation process also is influenced by a wider customer network or ecosystem, which consists of other customer-related actors (e.g., family, friends), beyond the firm's control, who influence the customer's value creation process (Voima et al. 2011b).

Therefore, the customer sphere is defined as the experiential sphere, outside direct interactions, where value-in-use (real value) emerges (is created) through the user's accumulation of experiences with resources and processes (and their outcomes) in social, physical, mental, temporal, and/or spatial contexts.

Interaction and the roles of the customer and the service provider

From a value creation perspective, our focus has been on the joint and customer spheres. Interaction is central to the joint sphere. From a value-creation perspective, we distinguish two types of interactions: *direct* and *indirect*.

A direct interaction refers to a process by which the customer's and firm's resources (personnel, system, servicescape) interact through an active and ongoing coordinated, dialogical process. In service marketing research, production and delivery processes have been the focus. Direct interaction usually takes place in the parts of these processes that occur simultaneously with the customer's use process, but it can occur in any type of process in which the customer interacts with the firm's resources in a dialogical manner, such as in design or product development.

Indirect interaction refers to situations in which the customer uses or consumes resources that are outputs of the firm's processes, such as a product provided by a firm, and thereby interacts with this resource. Interactions with the firm's processes do not belong here because they are direct interactions. In a service context, when the direct interactions have ended, the customer generally interacts with the resource or outcome of the service process—such as wearing a suit retrieved from the laundry. Value is created (emerges), because the user feels well dressed and gets compliments on his or her appearance. Indirect interactions also take place before direct interactions, such as when the customer reads a service provider's travel brochure and searches for alternative vacation sites for the family.

By analyzing the joint and customer spheres in value creation through different types of interactions, we gain a more profound understanding of the roles of the customer and the provider in value creation. Table 2 shows that the roles of the customer and the provider vary in different value creation spheres. In the joint sphere, value creation or destruction is always to some extent a dialogical process. In the customer sphere, the value creation process is dominated

Table 2 Direct and indirect interactions: defining the roles of the customer and service provider

	Provider sphere	**Joint sphere**		**Customer sphere**	
	Provider	**Provider**	**Customer**	**Customer (individually)**	**Customer (collectively)**
Value	Potential value-in-use	Value-in-use	Value-in-use	Value-in-use	Value-in-use
	Indirect interaction	**Direct interaction**		**Indirect interaction**	
Value creation	Value facilitation The service provider facilitates (e.g., produces and delivers) the customer's value creation with resources/processes that are used and experienced in the customer sphere	Value co-creation The service provider's resources/processes/ outcomes interact with the customer's resources/processes in a merged dialogical process	Value co-creation/ Value creation The customer's resources/processes interact with the service provider's resources/processes/ outcomes in a merged dialogical process	Independent value creation The customer's resources/processes/ outcomes (visible and/or mental) interact with the service provider's resources/processes/ outcomes in an independent (individual and/or social) value creation process (indirect interaction)	Independent social value co-creation Other actors/activities/ resources interact with the customer's resources/processes/ outcomes (visible and/ or mental) in a collective/social value creation process
Example	1) The tour operator designs and sends a new brochure twice a year to the customer. 6) The tour operator confirms the order by mail and informs the customer of rescheduled flight times.	5b) The tour operator's service system checks availability and lets the salesperson finalize booking of the trip for the family.	5a) The customer phones the tour operator and books the trip for the family.	2) The customer reads the travel brochure and dreams about a vacation for the summer (independent individual value creation). 8) The customer looks at pictures from the vacation and remembers how excellent the food in the hotel was (independent individual value creation).	3) The customer discusses different destinations and hotels with the family over dinner (independent social value co-creation) 4) A colleague recommends a specific hotel and the customer reads some reviews of the hotel on different websites (independent social value co-creation). 7) The customer is delighted by positive comments about her suntan (independent social value co-creation).

Line of visibility/provider control

and controlled by the customer in an independent sense. Recent service marketing literature suggests that value co-creation may be defined as customer realization of the offering to obtain value-in-use (e.g., using an iPhone; Ng et al. 2010). However, we posit that without analyzing the form of interaction with the resource obtained from the company, this definition becomes too wide. When defining the nature of value creation or value co-creation in the customer sphere, the service provider's ability to *indirectly* interact with the customer through the resources provided is crucial. The line of visibility (Shostack 1981) and the provider's span of control are therefore important issues.

In the open, joint sphere, the customer may create value by interacting directly with the service provider's resources in a merged dialogical process. For example, the customer may phone the tour operator and through a dialogue with a salesperson book a trip for the family. In addition, the customer can create value independently of the service provider, in a one-sided process in which the customer interacts with the service provider's resources only in the closed, customer sphere (indirect interactions), such as when the customer reads the tour operator's brochure and dreams about a vacation for the summer. The service provider cannot influence or take part in this value creation process, except through the output (brochure) of its previous processes. Because there may be a grey zone between direct and indirect interactions, Table 2 is a simplification of reality. Value may also be created in spaces where the service provider monitors, to some degree, the customer's use of firm-provided resources/processes/outcomes but cannot directly influence the customer's value creation process through active dialogue. Moreover, when the customer creates value independently of the service provider, value creation is influenced by several factors not related to the service provider (e.g., interactions with family members or friends or in social media).

Service marketing literature recognizes the influence that customers have on each other's service experiences in the firm-controlled service context (Verhoef et al. 2009; see also Eiglier and Langeard 1976; Langeard and Eiglier 1987). However, the customer's independent value creation is complicated and extends beyond the visible service context to his or her life and ecosystem (Heinonen et al. 2010; Voima et al. 2011b). Thus independent value creation may be both individual and social (Epp and Price 2011; Helkkula et al. 2012), influenced by the customer's social networks and ecosystems (Gummesson 2006; Vargo and Lusch 2008; Voima et al. 2011b). As Table 2 indicates, the customer may reflect on different destination possibilities and hotels with many different persons, family members, and others, where value is created in a social and collective value co-creation process, which still is independent of the service provider and its actions. Therefore, in the customer sphere, the customer's experiences and perception of value-in-use may be divided into *individual* and *collective* phases.

Customer experience is a constantly evolving process that makes value creation a temporally accumulative process, emerging through past, present, and future (envisioned) experiences (Helkkula et al. 2012; Voima et al. 2010). During a vacation, the customer may be delighted when realizing that the food in the hotel is much better than previous experiences with hotels or the lunch restaurant the customer visits weekly. Children's memories of the vacation and opportunities to swim in the waves at the beach may be happily reflected on for a few months, every time they take a bath. Furthermore, value is not created only in visible physical interactions but also emerges in invisible and mental actions (Heinonen et al. 2010; Voima et al. 2010). As Helkkula et al. (2012) argue, interactions between customers and service providers do not always need to be experienced in reality but may also be imagined or take the form of indirect interactions with the service, such as through peer communication and word-of-mouth recommendations, reviews, or advertisements. In Table 2, for these value creation processes in the customer sphere, we use the term *independent social value co-creation*.

Discussion and conclusions

The extant discussion of value creation and co-creation does not reflect an explicit definition of value creation or offer a clear view of value. The underlying, though never explicitly formulated, view of value creation is of an all-encompassing process, including activities by service providers, customers, and possibly also other actors, which leads to the conclusion that everything is value creation and everyone co-creates value. As we have concluded, when value creation is defined in this way, it functions as an effective metaphor to indicate that all actors can influence value in some way, but it also becomes less meaningful for analytical use and further theoretical and practical elaborations. Moreover, it is in conflict with the logic of value-in-use. Therefore, we suggest another approach to defining value creation.

What is required to understand service as a perspective, according to a critical service logic, is a structured definition of value creation, based on a clear, formal, consistently used definition of value. Contemporary literature demonstrates that value is best defined as value-in-use, achieved through "an interactive relativistic preference experience" (Holbrook 1994, p. 27). Logically, the value-in-use concept also implies that value is created by the user during the process of using resources/processes/outcomes, as demonstrated by Becker (1965) with his theory of the household as a utility-producing unit. Although context, social context, interaction, and possession provide alternatives, *use* is the fundamental concept in the analysis of value and value creation. It is through use and during usage that value emerges or is created. The level of value derived through use reflects social, spatial, temporal, and physical contexts in which usage takes place, and it depends as well on how these aspects of the usage context change.

Consequently, in our analysis of service logic, we define value as value-in-use, created by the user (individually and socially), during usage of resources and processes (and their outcomes). Usage can be a physical, virtual, or mental process, or it can be mere possession. Logically, value creation is the customer's creation of value-in-use. In this way value creation as a process is clearly defined, using only one well-defined value concept (value-in-use). A rigorous definition of value creation and value enables an analysis of the roles, nature, scope, and content of value creation in the service provider's and customer's value spheres. It also demonstrates how, through the creation and use of direct interactions with customers, firms can access an otherwise closed customer value sphere and thereby influence the customer's value creation, assuming they successfully manage the interaction. Mismanagement instead may lead to value destruction.

Our analysis of value creation in the service logic shows that the value-related foundational premises of mainstream literature (SDL) should be reconsidered to enable further theoretical and managerial elaborations. We reformulate these foundational premises in Table 3, using the analytical definition of value creation and value as value-in-use (see also Grönroos 2011). As our analysis demonstrates, these three premises actually include six statements about value creation. However, to match the original numbering (e.g., Vargo and Lusch 2008), we label the revisited statements with the numbers 6 (customer's role in value creation), 7a/1 (firm's fundamental role in value creation), 7a/2 (firm's expanded role in value creation), 7b (firm's marketing opportunities in value creation), 10/1 (how value is created/emerging), and 10/2 (how value is determined).

The customer as value creator

In the original theory, the customer was always a co-creator of value. This claim, as well as the follow-up assertion that

Table 3 Revisiting the foundational service logic premises with a structured definition of value creation (Source: based on a table in C. Grönroos (2011). Value creation in service logic: a critical analysis. *Marketing Theory,* 11 (3), p. 293.)

Revisited foundational premises		Original premises
No. 6	The customer is the value creator	The customer is always a co-creator of value
No. 7a	1) Fundamentally, by providing potential value the firm is a facilitator of value for the customer 2) Provided that the firm can engage with its customer's value-creating processes during direct interactions, it has opportunities to co-create value jointly with them as well	The firm cannot deliver value
No. 7b	The firm is not restricted to making value propositions only, but has an opportunity to directly and actively influence its customers' value creation as well	The firm can offer only value propositions
No. 10	1) Value is accumulating throughout the customer's value-creating process 2) Value is always uniquely and both experientially and contextually perceived and determined by the customer	Value is always uniquely and phenomenologically determined by the beneficiary (e.g., customer)

the firm is also always a value co-creator, only holds if everything is considered value creation, and the actors involved have no specified roles in the process. However, although this holds as a metaphor, such an unstructured, all-encompassing view is problematic for further elaborations. We argue that value creation must be defined rigorously and grounded in the value-in-use concept. By defining value creation in the service logic as the customer's creation of value-in-use, we conclude that instead of always being a co-creator of value, the customer is a value creator (cf. the customer-dominant logic concept which emphasizes the active role of customers; Heinonen et al. 2010).

If the firm can access the closed customer value sphere, a joint value creation sphere is created, and then service providers may become involved in joint value creation with the customer. Then and only then is the customer a co-creator of value with the firm. Consequently, this premise is formulated as follows: *The customer is the value creator.*

The firm as value facilitator

The seventh foundational premise includes two statements (see Table 3). The first claims that the firm cannot deliver value. If the firm is a co-creator of value, and thus creates real value, logically the value created must be transferred to the customer. Accordingly, the firm's contribution to value must be delivered to the user, though what value is remains unclear. If we define value creation as the customer's creation of value-in-use, the customer is value creator, and the fundamental role of the firm must differ. The firm operates in a closed sphere and produces (designs, develops, manufactures, delivers) resources, which represent potential value for the customer. When used by customers, they make value emerge, such that by creating resources embedded with potential value-in-use, the firm facilitates customers' value creation. *Fundamentally, by providing potential value, the firm is a facilitator of value for the customer* (No. 7a/1).

Opportunities for the firm to co-create value with the customer

The customer's value sphere is closed to the firm, but if contacts between the firm and its customers exist or can be created, direct interactions occur, and the firm gains access to this closed sphere. As Grönroos (2011, p. 288; emphasis in original) points out, even though the customer is the one who creates value "… *the service provider could be invited* (by the customer) *to join this process*." If the firm as a service provider manages to engage with the customer's value creation process in the joint sphere, opportunities for value co-creation with the customer exist. This point follows from the observation that, unlike the implicit implication of SDL (leading to the conclusion that the firm can only make value propositions), the service provider's and the customer's processes do not flow in parallel without reciprocal influence. Rather they can develop into a merged, dialogical, coordinated process, where both parties operate within each other's processes. The existence of this joint sphere, with its direct interactions, provides a platform for co-creation. Of course, the two processes do not necessarily merge and become dialogical, but if they do, co-creation takes place. In addition, the outcome may be co-creative or co-destructive (Echeverri and Skålen 2011), so the firm must handle this interaction platform carefully.

It is not the customer's alleged role as a co-creator that is unique to service logic. Rather, the unique perspective of a service logic, compared with a traditional goods perspective, is the recognition that in certain circumstances, the firm can become a co-creator of value with its customers. *Provided that the firm can engage with its customers' value-creating process during direct interactions, it has opportunities to co-create value jointly with them as well* (No. 7a/2).

Opportunities for the firm to influence customers' value creation

Although the concept is never explicitly defined in SDL literature, the value proposition must be considered a *promise* that customers can extract some value from an offering. The statement that firms can offer only value propositions is based on the sense that during direct interactions, the firm's and the customer's processes flow in parallel, and the actions of one party do not influence the other party's processes, nor can they directly change the actions of the other party. As we have demonstrated, interactions cannot logically be understood this way. Because the direct interactions in the joint value creation sphere can develop into merged dialogical processes, the firm as a service provider actively and directly influences and changes the flow and outcomes of the customer's process, and thus of the value creation process. A service provider then may *go beyond making value propositions*. For marketing, this observation is important and in accordance with findings in service marketing research (e.g., part-time marketer, interactive marketing), which is a unique contribution of the service logic.

The statement that firms can offer only value propositions seems based on a goods perspective (goods-dominant logic), where no direct interactions exist, or on an implicit definition of the value proposition as something other than a promise about value. From a service logic perspective, this statement should be reformulated as follows: *The firm is not restricted to making value propositions but has an opportunity to directly and actively influence its customers' value creation as well* (No. 7b).

The emergence of value

According to the tenth foundational premise, value is always uniquely and phenomenologically determined by the customer (or other beneficiary). Neither this premise nor any other foundational premises detail the fundamental question of how value forms or emerges during value creation, because prior publications on the SDL do not include an explicit, rigorous definition of value creation. It is fundamental to the understanding of value creation that we realize how value emerges (as value-in-use). As we have discussed, value-in-use does not exist as a singular entity at any given point in time. Just as service quality accumulates throughout the usage process (Grönroos 1984; Parasuraman et al. 1985), the experience of value and the value creation process accumulates as a dynamic process with both creative and destructive phases. Value-in-use emerges over time through physical, mental, and/or possessive actions by the customer in dynamic contexts, formulated as follows: *Value accumulates throughout the customer's value-creating process* (No. 10/1).

How value is determined

Before value is determined or assessed by the customer or by any other beneficiary, it must be perceived or experienced; otherwise, there is nothing to assess. The questions of how and by whom value is experienced also must be included. Because foundational premises are not based on an explicit definition of value creation, it has not been possible to offer answers to these points. However, as the tenth premise states, value is determined uniquely by the customer, and also is uniquely experienced by the customer. Because the term *phenomenological* may carry many meanings, we suggest a more explicit expression. Customers do not only determine value, they holistically experience it (Helkkula and Kelleher 2010). Therefore, value is a concept that is contextually bound, longitudinally developed and accumulating, and always dynamic (Voima et al. 2011a). Accordingly, we reformulate the tenth foundational premise as follows: *Value is uniquely experientially and contextually perceived and determined by the customer* (No. 10/2).

Managerial and research implications

Defining value creation as the customer's creation of value-in-use and determining that co-creation of value only may take place in a joint value sphere suggests that service providers must address their processes and activities in a structured manner. Many of the firm's processes, which take place in a provider sphere without direct interactions with customers, have no direct impact on real value for the firm's customers. They only enable the firm to produce potential value, as expected value-in-use. This view may help managers refrain from using customer-aversive language, such as "the firm delivers value to its customers," which conflicts with the contemporary view that value is created by the firm's customers, not by the firm, which creates potential value. Through their actions in the provider value sphere, rather than delivering readily created value to customers, firms facilitate their value creation.

Another important implication is the observation that value co-creation is not an unspecific process including unspecified activities in unspecified contexts but rather is restricted to a joint value sphere of direct interactions. In this sphere, the customer may join the firm's various processes, so the firm gets access to the customer's value creation and may engage in value-creating processes. Managers can discern in which contexts the firm can influence the emergence of value for customers directly and actively, in contrast with the provider sphere, which is closed to customers and enables the firm only to facilitate customers' value creation by producing and providing resources for their use. We thus clarify the role of goods and other resources as carriers of potential value. From a managerial perspective, it is also noteworthy that by changing some temporal, spatial, physical, and/or social aspects of the context of value creation, the firm may influence its customers' experiences with the firm, and thus their value creation.

Service providers need to find access to customers' value sphere. In particular, firms should make use of existing direct interactions with customers and, when appropriate, strive to create additional interactions. However, the existence of direct interactions is a platform for value co-creation with customers only, which the firm must be prepared to use successfully. Wrongly or ineffectively used, this direct interaction platform may lead to value destruction in the customers' processes, or in the best case have no significant impact. To understand the positive or negative effects on value creation, firms need to analyze the behavioral logic of their customers.

The observation that firms can access the closed customer sphere and directly and actively influence their customers' creation of value-in-use has important implications for marketing practice. By actively managing the value co-creation platform offered by firm–customer interactions, the service provider is no longer restricted to making promises (making value propositions) only. In addition, it can influence its customers' perceptions of the firm and its products and services, and their willingness to repurchase, which clearly is a marketing issue. However, such marketing activities are mainly outside the realm of the traditional marketing function, which emphasizes the importance of interactive marketing, part-time marketers, and internal marketing as suggested in the service marketing literature.

From a theoretical perspective, we highlight the importance of distinguishing among different value spheres—provider, joint, customer—and note the pivotal role of direct interactions for value co-creation opportunities, which are critical to understanding value creation and co-creation in service logic. Further research on the effects of these spheres in value creation, including when, where, and how firms may benefit from gaining access to the otherwise closed customer value sphere, are research directions warranted by our analysis. How service providers can perform successfully in direct interactions, and what is needed for such performance to support customers' value creation, instead of creating value-destructing effects, are additional areas that need further research. Moreover, what is required to enable firms to get access to the customers' sphere and strategies for doing so are important research areas.

The importance of the joint and customer spheres in understanding value creation and co-creation emphasizes the need to study customers' reactions and behaviors from a service logic point of view. Adopting the service logic requires understanding the customers' logic and value-creation context (Heinonen et al. 2010; Voima et al. 2010, 2011b). Further research in this area may require research methods that generally have been applied less frequently in marketing research though (e.g., ethnography).

Finally, service providers' opportunities to co-create value with customers during direct interactions influence not only customers' value creation but also their future purchasing and consumption behavior. By employing interactive marketing, part-time marketer, or servicescape concepts, marketing can be extended beyond its traditional borders. As firms are no longer restricted to making value propositions, many marketing implications of value co-creation in the joint value sphere remain to be explored.

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