

Customer value co-creation: a conceptual measurement model in a Service Dominant Logic perspective

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Abstract

The current study aims to develop a conceptual model for the measurement of value co-creation in line with S-D logic assumptions, in an effort to fill two gaps in literature, emerged from a brief review about the controversial issue of customer value co-creation operationalization. The first lack is connected to the inadequate classification of the construct, especially regarding the identification of co-creation real practices, while the second one concerns the progressive departure from S-D logic mindset on the part of previous researches. Based on McColl-Kennedy et al. (2012) contribution, a framework which pinpoints eight dimensions of value co-creation, each of them divided into sub-dimensions, is proposed and discussed.

Key words: *value co-creation, conceptual model, measurement*

Paper type – *Research paper*

1. Introduction

In the contemporary service era, an increasingly cultivated concept within service research is value co-creation (Vargo & Lusch, 2008; Vargo, 2008). Value creation pivots on the idea that value exchange is not only defined in terms of the supplier, but is also generated by interaction among providers, users and other co-creators.

Although it represents a cutting-edge phenomenon and despite the need for the development of a value co-creation measurement procedure (McColl-Kennedy et al. 2012), adequate research aiming at systematizing the construct or at proposing an univocal measurement framework has not yet been devised.

Notwithstanding several researchers declare their adhesion to the original propositions of Vargo & Lusch (2008), some of them deviate from the Service-Dominant Logic (S-D logic) pathway and so doing generate a little confusion in literature. As a result, in current study suggests a conceptual model for the measurement of value co-creation in line with criteria of S-D logic.

The aim of this work is to propose the theoretical foundations for testing the empirical validation of a value co-creation scale in order to identify, measure and clarify the dimensions deriving from the observation of the construct, according to strictly focused S-D logic mainstream principles.

The structure of the paper is as follows: in the first section, a short literature review is set out to obtain an overview of value co-creation measurement; in the second, the value co-creation concept and its dimensions are analysed; in the final section, the conceptual model presented and the relative managerial implications of value co-creation measurement are discussed.

1. Customer value co-creation measurement: a brief literature review

Within the *Service-dominant logic* framework (SDL, Vargo & Lusch, 2004; Vargo & Lusch, 2008), numerous studies relative to issues in value co-creation measurement have been put in place (Randall et al., 2011; Xie et al., 2007; Payne, Storbacka e Frow, 2008; McColl-Kennedy et al. 2012; Yi & Gong, 2013; Neghina et al. 2014), from which the customer value co-creation measurement debate has emerged.

Each study, apart from potentially strong and weak points, indicates appropriate research directions, approaches and eventual gaps, in order to analyse in depth this complex construct.

The literature is not streamlined and appears interwoven with a conceptual ambiguity that is also reflected in the terminology¹, precisely because of the unrestrained use of the term value co-creation in diverse contexts.

¹ Such as the frequent cases of overlap between co- production and co-creation, erroneously considered as synonyms (Alexander, 2012). For additional clarifications on the differences between the two expressions, see also paragraph 2

Although Vargo and Lusch (2004, 2008) adapt the concept to the S-D logic and Lusch et al. (2007), and Vargo et al. (2008), combine it with Service Science, the construct is usually used indiscriminately in different settings such as strategic contexts (Prahalad & Ramaswamy, 2000; Prahalad & Ramaswamy, 2003; Prahalad & Ramaswamy, 2004; Cova & Salle, 2008), industrial marketing and the Nordic School (Gummesson, 1996; Grönroos, 2000; Grönroos, 2008; Payne, Strobacka & Frow, 2008) and the Consumer Culture Theory (Xie et al., 2008; Schau, et al., 2009; Edvardsson et al., 2011).

Recently, Grönroos and Voima (2012) and Grönroos and Voima (2013) developed their Service Logic theory, which differs slightly from S-D logic, attempting to clarify that value co-creation can be examined from different perspectives. Grönroos and Voima (2013) in effect, maintain that value co-creation is primarily a function of interaction between employees and customers, while Vargo and Lusch (2008) state that customers are always co-creators, emphasizing that co-creation does not end in the single moment of consumption.

Few studies however, explore the nature and the various dimensions of consumer value co-creation behaviour. The most significant, is the theoretical contribution of Neghina et al. (2014). In a conceptual paper, the authors divide value co-creation into six dimensions or types of actions carried out jointly by users and providers, also identifying the antecedents (communicative-interactive profile-, relational- social profile -, knowledge- cognitive profile) of the concept. However, the Authors do not conform to the assumptions of Vargo e Lusch (2008), but comply with Grönroos & Voima (2013), emphasizing that the study does not completely follow the S- D logic. Furthermore, it is worthy of note that as well as in their recent paper, Neghina et al. (2014) also designed a theoretical model which included no empirical validation.

Regarding empirical research, Randall et al. (2011), Yi & Gong (2013) and Mc- Coll Kennedy et al. (2012) are particularly relevant.

The first study proposes the construction of a measurement scale composed of three dimensions, *connection*, *trust* e *commitment*, merging the value co-creation construct with that of connection, rendering generalization more difficult. If the adoption of a mixed method, i.e. the combination of qualitative (in-depth interviews) and quantitative (survey) analysis techniques, represents an added value for the above-quoted work, its limitation is beyond doubt, the gradual departure from S-D logic in favour of “customer relationship management” (CRM, Newell, 2000; Girishankar, 2000).

In the second work, Yi and Gong (2013) consider value co-creation as a third order factor through the lens of two theories: *customer participation behaviour* and *customer citizenship behaviour*, related respectively to the concepts of *in-role behaviours* and *extra-role behaviours* (Yi et al., 2011). Initially referred to employees (Katz and Kahn, 1966), in-role behaviours are essential for

the proper execution of work, whereas extra-role behaviours refer to actions not included in the basic duties connected with the job, which fall outside the range of workers' roles and which ensure that they feel active members of the company and cooperating with it in order to obtain value. Also in this case the identification of the measures of customer value co-creation is not devised within the mainstream of SD Logic, despite being carried out on the basis of methodological quantitative standards (Churchill, 1979; Diamantopoulos & Winklhofer, 2001) normally adopted in studies on consumer behaviour.

Finally, Mc-Coll Kennedy et al. (2012) separate the construct into eight activities, pinpointing the different types of value co-creation practices in terms of activities and interactions actually accomplished by users not only in the moment of interaction with employees. The research, conducted inductively, derives these dimensions from the analysis of a set of interviews administered to a sample of 20 subjects. The added -value element of the paper is the identification - within a multi-faceted phenomenon such as value co-creation - of the effective actions taken by consumers, moving constantly in line with the assumptions of S- D logic.

However, at the same time, in this work, the eight components of value co-creation are merely set out without offering a critical analysis functional to their eventual generalization or studying their internal composition in terms of sub-dimensions. This is consequently one significant drawback of the research, which analyses activities based on empirical behaviours without semantically developing a theoretical construct to insert within a validated model.

Hence, apart from the contribution of McColl- Kennedy et al. (2012), our analysis highlights that most of the above-mentioned studies originally refer to S-D logic, but then end up in supporting their arguments with quite different theories. Evidently, a study discussing the measurement of customer value co-creation based on a version of S-D Logic is clearly necessary.

Therefore, the aim of the present paper is to bridge this gap in literature by proposing a theoretical model for measuring the concept of customer value co-creation. In particular, it can be herein given a partial answer to the explicit demand posed by McColl-Kennedy et al. (2012) for "the development and validation of a scale of customer value co-creation based on the behavioural and cognitive activities identified" (p.16).

Accordingly, the study of McColl-Kennedy et al. (2012) represents the starting point of this paper, the aim of which is to pursue with rigour S-D Logic and Science Service (Maglio & Spohrer, 2008, Barile & Polese, 2009), aligning itself with mainstream research.

A dual purpose is therefore proposed: 1) the elaboration of a conceptual model for value co-creation measurement strictly and purely based on a service dominant logic perspective and 2) the identification and the definition of activities and practices concretely performed by service users

during value co-creation (a need highlighted by authors such as Payne, Storbacka & Frow (2008) and Arnould, Price and Malshe (2006)), as well as the semantical and theoretical discussion of the dimensions and subdimensions involved in the proposed conceptual model.

2. A conceptual framework of measurement: value co-creation activities through the lens of Service-dominant logic

As previously mentioned, the paper is based primarily on principles of S-D logic (Vargo & Lusch, 2004), where according to this approach, consumers are no longer mere passive recipients of exchange relationships. On the contrary, consumers are active participants in activities of the organizations, thanks to their ability to generate essential resources, above all knowledge.

Furthermore, the work of McColl-Kennedy et al. (2012), which in the health sector traces specific co-creation activities, symbolizes the starting point for customer value co-creation operationalization.

The Authors, “building on the emerging model of co-creation of value (Lusch et al., 2007; Schau et al., 2009; Vargo and Lusch, 2008), in which value is determined *in use* through activities and interactions of customers with the service provider/ providers and others” (McColl-Kennedy et al., 2012, p. 1), define customer value co-creation as “ a benefit achieved from integration of resources through activities and interactions with collaborators in the customer’s service network” (ibidem, p. 1). Along these lines, value co-creation is portrayed as a comprehensive and multi-stakeholder process that includes, in addition to the suppliers, other entities, such as firms, public sources, private sources and personal activities undertaken by consumers.

The Researchers identify eight value co-creation activities: *cooperating, collating information, combining complementary therapies, co-learning, changing ways of doing things, connecting, co-production and cerebral activities*. However, they do not semantically analyse the differences between the dimensions, but merely present examples derived from respondents’ answers. However, the proposition of a theoretical framework must necessarily trigger theoretical discussion in order to identify the domain of each activity or, better, dimension , adapting them from the context in which they derive (healthcare) to a more general one, remaining in a perspective of S-D logic.

Combining the results of the McColl-Kennedy et al. (2012) qualitative research with a strong literature review on S-D logic and on value co-creation dimensions, it is proposed that customer value co-creation behaviour has a hierarchical factor structure (see figure 1). In particular, as shown in Figure 1, the construct is considered from the perspective of eight complex activities/dimensions, which in turn can be divided into several sub-dimensions: *cognitive activities, cooperation,*

information research and collation, combination of complementary activities, changing habits, co-production, co-learning and connection.

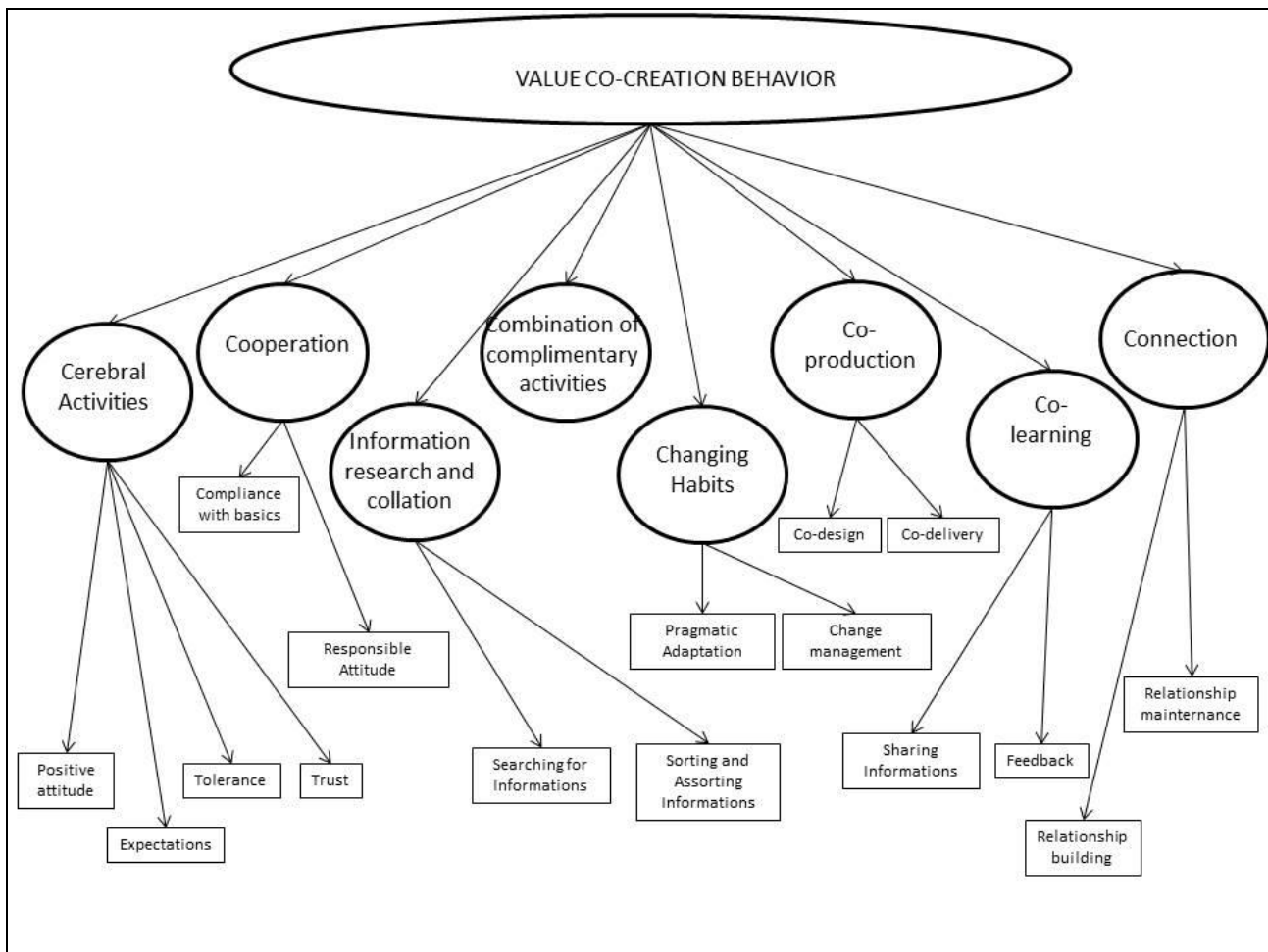


Fig. 1 – The value co-creation measurement conceptual framework

Dimension 1: cerebral activities

In the light of the significance of intangibles in today’s consumption processes, it can be sustained that value co-creation primarily derives from consumers’ mental attitudes towards their potential all-round involvement in service delivery.

Consequently, the first value co-creation dimension of cerebral activities represents the set of aptitudes and expectations that psychologically predispose buyers to the cooperation with service providers (McCull-Kennedy et al., 2012). This category includes the general positive attitude of

users toward suppliers, expectations preceding fruition, in terms of hope of achieving desired outcomes together with the ability of consumers to tolerate hypothetical lacks in services and trust in the supplier skills.

The combination of the mental profile of buyers with consumer behaviour is not a recent concept, having been formerly found in consumer behaviour studies (Howard, 1963; Neal et al., 2000; Solomon et al., 2006) and then adopted in 1999 by Arnould and Price in the consumer culture theory (CCT). These theories extend the factors underlying purchase attitudes, by establishing a link between the effective final buyers' choices and their cognitive and emotional states.

In particular, in value co-creation research, intellectual aspects become prerequisites for value generation, involving no longer just monetary but also psychological efforts in order to participate in provision (Hoyer et al., 2010; Bendapudi & Leone, 2003; Polese et al, 2009; Carrubbo, 2013). Xie et al. (2008) investigate the motivational mechanisms underlying an individual's propensity for "prosumption" (Toffler, 1980, p.342), associated with co-creation, conceived as "value creation activities undertaken by the consumer that result in the production of products they consume and eventually become their consumption experiences" (p. 110). In this way, value co-creation is no longer understood as a punctual short term transaction but as an all-pervading and all-encompassing process, which first of all offers an experience to the consumer and not only a product or a service (Pine and Gilmore, 1999; Vargo and Lusch, 2004; Prahalad and Ramaswamy, 2004).

The positive attitude of the consumer, which according to McColl- Kennedy et al. (2012) leads users to assume a more active engagement raising the possibility of service positive outcomes, is the first sub-dimension attributed to cerebral activities. At the same time, Xie, Bagozzi and Troye (2008) demonstrate through empirical research that the positive thinking can be considered as an essential component of the prosumption and value co-creation processes.

The second cerebral sub-dimension is that of customer expectations with regard to consumption. According to some scholars of economic psychology (Cardozo 1965; Katona, 1960), in fact, expectations are intrinsic in the psychological assets at the basis of consumption process, as indicators to predict consumer behaviour and to direct providers towards continuous improvement of service (Parasuraman et al., 1991). Starting from the failure to meet users' hopes, they can at various levels (Parasuraman et al., 1991) enhance the attitude which Yi and Gong (2013) define tolerance, i.e. the consumers' willingness to be patient when service does not completely reflect their anticipations, For example, the recurring delay in service or the inadequacy of infrastructure (Lengnick-Hall et al., 2000) is a case in point.

Finally, it is essential to include trust in psychological requisites that are included in the value co-creation process, as it lays the foundation for the establishment of strong links with providers and

for potential loyalty. Trust is consequently considered as “a psychological state comprising the intention to accept vulnerability based upon positive expectations about the behaviour of others” (Rousseau, Sitkin et al., 1998, p. 395).

In accordance with Dierks’ view (2005), the acquisition of confidence by users with regard to the service provider is one of the determinants of consumer behaviour, on a par - if not more relevant - with factors such as economic sacrifice and time expenditure, contributing to reduce the uncertainty and the risks associated with the purchase.

Dimension 2: cooperation

The dimension of cooperation is shaped from all the operations of directives’ (Bettencourt, 1997) and acceptance of guidelines, and in general of alignment with the basic demands made by the provider, implemented by consumers to comply with most of their tasks (Virta, 2014).

In this phase there is a minimum level of co-creation, typical of the so called “simple activities” (McColl-Kennedy et al., 2012, p.6) characterized by a low - if not minimal - degree of participation, in which the user simply shows the will to adhere to the prerequisites that establish the foundation for service delivery, later completing the tasks that arise from it.

The first sub-dimension of cooperation identified here is “compliance with basics” (McColl-Kennedy et al. 2012, p. 9).

The literature on the above mentioned concept is copious as research has been conducted in various fields, such as psychology and healthcare or that of consumer behaviour (Dellande et al., 2004). In particular, in healthcare, compliance mainly concerns change over a given period of time. However, also with reference to marketing, Bowman et al. (2004) have interpreted the notion as “the conformity or adapting to another person’s wishes, to a rule, or to necessity” (p.1).

For value co-creation process, therefore, compliance represents user conformity with the instructions provided by service suppliers (e.g. from turn out in a certain place at a certain time to not preventing the provision in any way). In some empirical studies, compliance is linked to consumer perception about achievement of objectives and to customer satisfaction (Dellande et al., 2004; Fattal et al., 2005; Botti et al, 2014). According to Ouschan et al. (2006), beneficiary behavior can range from the total lack of compliance, through a minimum level of compliance, up to full engagement.

Cooperative activities also comprise a second sub-dimension, referring to the assumption of responsibilities (Ennew and Binks, 1999) on the part of buyers, who, like real organizational members, recognize their co-creation duties, almost assuming the role of a "part-time employee" (Bowen, 1986, p. 373).

Ennew and Binks (1999, p.123) deem this concept as a “responsible attitude” on the part of consumers that - just in the same way as employees - have certain obligations (Bowen and Schneider, 1988), simultaneously reflect the notion of “cooperative behaviour” introduced by Bettencourt (1997, p.386), with reference to the extent users conform to the roles expected by suppliers.

Dimension 3: Information research and collation

A further dimension in the measurement framework introduced here is the search for and collation of information (McColl-Kennedy et al. 2012; Caridà A. et al. 2014). This activity consists in projecting consumers into active participation and is understood as a set of basic informative actions the user should undertake to make use of service provision.

While the definition of *collating information* provided by McColl-Kennedy et al. (2012) regards sorting and assorting activities, Caridà et al (2104), within the S-D logic mainstream, also attribute the search for information to the sub-dimension in question. In line with this latter interpretation, the task of collating information can be considered the result of the search for information related to service, collection and general organization (sorting and assorting).

Regardless of the area of interest (from statistics to marketing), searching for information (Hirschman, 1981) is always an operation for estimating consumption. Even in this context it represents a necessary step that can enable value co-creation (Hirschman, 1981), as without such information buyers would be unable to take part in the service or the delivery could not even begin. At this level, customers should undertake preliminary information searches in order to obtain the necessary data to clarify service requirements and consumption modalities and to satisfy their cognitive needs (Kellogg et al., 1997). Users require explanations about service status and parameters and demand instructions about how to accomplish their co-creation tasks, depending on providers’ expectations about the interactions (Yi and Gong, 2013).

Yi and Gong (2013) furthermore, affirm that such a search process is significant in value co-creation mechanisms for two reasons: 1) it decreases uncertainty and permits customers to understand and control the value co-creation environment; 2) it allows individuals to handle their co-creator role.

Information can be obtained in many ways: users can ask other people in their own relationship network directly for information or they can monitor the behavior of experienced customers to obtain informational cues (Kelley et al., 1990; Morrison, 1993).

It should be emphasized that the search for information among customers not only refers to the person with whom users are physically in contact but generally to all their personal resources which

can also create virtual interactions with counterparts. In this sense, new technologies² are becoming more and more important in information seeking activities: ICTs are essential for value co-creation, permitting users to search and to sort information more easily and faster, generating cost-savings and producing a more efficient service (Caridà et al. 2014)³.

In addition to research, current value co-creation also includes organization of information. This sub-dimension is defined by McColl-Kennedy et al. (2012) as the set of activities including grouping and sorting information about the service. Organization helps consumers to manage more easily its basic activities. In the educational sector, for example, maintaining and updating an agenda with deadlines and general information pertaining to service can help students to perform well and consequently to become more involved in the service itself.

Dimension 4: combination of complementary activities

The fourth macro-activity, the combination of complementary activities, concerns user involvement in further activities and in events related to the service or in additional services, mainly organized by suppliers in order to increase user engagement as well as interactive moments.

The concept is mutated from healthcare (Kelner and Wellman, 1997; Kremser et al., 2007), a field in which the practice of combining alternative medicine by patients with the main treatments is quite common. McColl-Kennedy et al. (2012) relate this sub-dimension to the medical sector too, debating specifically about “combining complementary therapies” and “use of supplementary medicine” (ibidem, p. 9).

However, as mentioned above, since nowadays users have become more competent in the service domain, being real experts that put into play several kinds of knowledge at the time of the interaction with providers, it would appear that the concept is adaptable to every type of service.

In truth, the need to combine and to integrate different resources (and/or activities) is also prevalent in the business sector at large, in response to the centralization practices of productive processes. In order to optimize their results, companies have gradually outsourced non-core activities (Kakabadse & Kakabadse, 2002; Prahalad & Hamel, 1990) encouraging customers to demand integrated solutions and to purchase combinations of diverse resources (Hakanen et al, 2014). These solutions represent sales bundles of products and/ or services that meet specific customer needs and offer a greater potential for value creation compared to the sale of individual components, thus raising

² The spread of information and communication technologies (ICTs) has brought extraordinary and unimaginable opportunities to improve the social conditions as well as the quality of life (e.g. in mobility, healthcare etc., Scarfò e Palmieri, 2014).

³ An example is represented by cloud computing (Mell P., Grance T., 2011) that allows any consumer to access information about the service at any time and from any location, thus involving a huge time and cost saving

competitiveness (Brady et al., 2005; Brax and Jonsson, 2009 ; Davies et al, 2007; Nordin & Kowalkowski, 2010; Tuli et al., 2007).

The practice therefore can be associated with every sector of services. As highlighted by Lakemond and Magnusson (2005), this can go hand in hand with the more general shift from production to use occurring within the SD logic that broadens the scope of supply. The phenomenon is also in line with the wider tendency on the part of contemporary consumers to seek experience and services rather than mere products.

For Hakanen et al. (2014), in fact, the development of integrated solutions stems from the desire on the part of companies to adapt trends and changes in consumption strategies and in customer needs and behaviour to the current market. To meet optimally the demands of buyers, however, companies need to seek employees capable of producing significant insights and complementary resources useful to understand individuals' requirements. Consequently, in the case of integrated services, participation is fundamental to value co-creation achievement. In doing so, these bundles of service are no longer distributed from the provider to the consumer (top-down), but co-created in the interaction, leading to an exchange of knowledge from user to provider (Gummesson & Mele, 2010; Lusch & Vargo, 2006; Lusch et al., 2010).

Moreover, in accordance with the vision of value co-creation as a long-range process, integrated solution suppliers should be able to deploy, manage and maintain their supply as part of an ongoing long-term agreement with users (Ivory et al., 2003). As further confirmation, all collateral services (for example, financing in the purchase of a car or the services of exam preparation in the education sector) or events (cultural events in academia, of the recreational type in hospitals, initiatives of a promotional kind – fund raisings, awareness campaigns - in other services), not fundamental to the proper execution of a service but instrumental to its effectiveness, can be included in this dimension. These activities can enrich service provision and possibly strengthen consumer sense of belonging.

Dimension 5: Changing habits

Changing consumer habits is an activity that points out the impact service has on the way of life of users, who can be more or less willing to change their behaviour according to the degree of participation in the consumption experience.

This macro-activity includes two steps: 1) “pragmatic adaptation” to changes resulting from the use of service (McCull-Kennedy et al., 2012, p.132); 2) change management, in which buyers choose to adapt to the changes caused by the service for the purpose of co-creating value (Virta, 2014).

McColl- Kennedy et al. (2012) state that pragmatic adaptation is the ability of the users- in this case patients- to restructure their existence starting from the new circumstances introduced by service which modify the practices and habits of the subjects themselves. The greatest difficulty lies in the patients' capability of accepting their critical health status and of considering their condition as normal, continuing their life and reintegrating in it, as far as possible, the activities previously carried out (Virta , 2014).

In a research on value co-creation during detoxification activities, Virta (2014, p.35) defines “awaking” what McColl-Kennedy et. al (2012) indicate as pragmatic adaptation. Throughout this activity, drug addicts realize that service supply can give them the opportunity to live a normal life without drugs. Once they become aware of the possible change that fruition can cause to their lives, the subjects have the possibility to choose whether or otherwise to adapt to the service.

Hence, as the previous dimension, also the one in question is initially, related exclusively to the health sector. However, the points of contact with a wider conception of service can also be identified.

The concept of consumer adaptation to consumption of goods stems from the *consumer behaviour* theory (Howard, 1963; Robertson et al., 1984; Neal et al., 1999), starting from the application of the social adaptation model – developed by Kahle (1983) in the field of consumer psychology theory – to the study of consumer behaviour and of change patterns that occur. According to Robertson & Zielinski, 1982, consumers are willing to change their values and their social roles to carry out and successfully conclude service fruition.

Having framed value co-creation as a pervasive phenomenon involving consumers in full, the idea seems to be accepted that changes in lifestyle arising from service experience may be numbered among the operations that co-create value (Ouschan et al., 2006). In this sense, pragmatic adaptation is to be extensively considered as the moment in which customers, having already come in contact with the supplier of all kinds of services, agree that provision would generate limitations and changes to their way of being and to their daily practices (McColl- Kennedy et al., 2012).

The second sub-dimension concerns a more advanced step compared with that of mere adaptation to the service: change management, both short and long term, resulting from service consumption. The activity is more relevant for some kind of services in which fruition is continued and in which the user has to deal with sacrifices that lead to changes in the users' way of life. Users, however, will tend to accept all the transformations that bring benefits to their way of doing (such as changes in the management of their own feelings, or in the sharing of their own emotions and feelings with friends and family, Virta, 2014)

Despite the fact that change management is more frequent in certain circumstances, it can apply to any kind of service, implying less radical modifications in some fields. Effectively, this activity is mainly linked to the way in which buyers embrace all the consequences arising from the service, managing to combine it with their own personal life (McColl-Kennedy, 2012).

Although such modifications imply behavioural changes imposed by service, it is still the user who decides how or whether to comply with these changes. The level of compliance will depend on consumer *empowerment* (Bitran and Hoeh, 1990). For example, changes of habits brought about by university life are essentially and directly controlled by students, since they will have to correct their routines in first person (e.g. devoting their life to a particular field of knowledge, to culture in general, or matching work with study in an effective way) to make the service more effective (Ouschan et al., 2006). Thus, value is created when the customer realizes that his life has improved thanks to the service and thanks to the use of a particular product or to the combination of both; evaluation is made according to the success of the management of metamorphosis caused by distribution (Virta, 2014). Consequently, consciously accepting and managing these changes increases co-created value.

This inevitably involves some repercussions in terms of co-created value, because beneficiaries are totally absorbed in service which becomes a real life experience and leads them to change their routine and to create new values, new practices, new meanings, then new knowledge both for themselves and the organization.

Dimension 6: co-production

The stage of maximum consumer involvement as regards the operations in service provision coincides with its production. Co-production, starting from Vargo and Lusch (2004) studies ranging to that of McColl-Kennedy (2012), can be actualized through processes traditionally understood as internal to the company, both prior to service provision - for example the design (co-design and co-development of new services) - and contemporary to provision itself (in general the activities of co-delivery, above all *service recovery*).

Often confused with the concept of co-creation, co-production⁴ (Normann and Ramirez, 1994; Gummesson, 1996) is distinguished by the broader construct being included in it, representing a small part of it. Where the co-production comprises consumers' involvement in the realization of value proposition, the co-creation is the actualization of the value proposition for value-in-use (Vargo and Lusch, 2004; Vargo and Lusch, 2008). Therefore, while users are always value co-creators, they cannot be co-producers (Vargo and Lusch, 2014).

⁴ Fuchs (1968) is one of the first authors to explain the term "co-production", a process by which the inputs introduced by people external to an organization are transformed into goods or services that people then reuse.

Co-production primarily refers to user participation in the development of value proposition and in the design for a more effective and efficient service delivery. Customers implement both an emotional commitment, in terms of feelings and past experiences accumulated in previous fruitions, and a practical one, through self-service activities. They also produce both *operand* (monetary capital) and *operant* (knowledge, psychological and social factors) resources.

Buyer intervention preceding provision may emerge for Vargo and Lusch (2014) in the development of a common value proposition and in the proposition of ideas for the design of a more effective and efficient offering. In the light of the concept of joint design, the term co-design (Prahalad and Ramaswamy, 2004; Grönroos and Voima, 2012), that is the collection of insights from customers in order to offer services in line with their requirements, has been introduced.

Secondly, at this level the real co-creation moment takes place: not only before but also during the distribution phase, users can make substantial contributions to the service, possibly arriving to influence the performance.

Because of consumer contribution in service delivery, this process has been called in the public sector *co-delivery* (Bovaird and Loeffler 2012; Kannan and Chang, 2013), which is the active participation of citizens on an ongoing basis in organizations' conduct. In other words, the process in question refers to the "provision of services through regular, long-term relationships between professionalized service providers (in any sector) and service users or other members of the community, where all parties make substantial resource contributions" (Bovaird 2007, p. 847).

The mechanism can be portrayed in terms of a joint service delivery which focuses on user aspirations, breaking down the barriers between them and the providers, who share the responsibility for the outcomes achieved by stimulating the undertaking of common "experience-based" (Nesta, 2013, p.7) decisions.

This means that buyers should have the ability to detect, understand and wherever possible remove resistance to the collaborative process (Vargo and Lusch, 2014), thus becoming key players in service recovery, that is a resolution of services inefficiencies (Vargo and Lusch, 2006), formerly strictly reserved solely for the back office.

The concept was first studied in the context of relationship marketing, which focused exclusively on the definition of the efforts put in place by providers to correct the omissions in service. Not surprisingly, Grönroos (1988) interprets service recovery in a simplistic way, as the series of actions taken by an organization in response to service deficiencies. Later, however, studies on customer participation focused on ways in which customers can be recruited to increase productivity in delivery, going beyond the mere consideration of service failure (Prahalad and Ramaswamy 2000; Schneider and Bowen 1995).

Ultimately, accepting a vision that aims to expand value co-creation as an inclusive process, and that requires user engagement in all stages, service recovery refers in our model not only to all the activities undertaken by consumers and providers to rectify and restore the service, but also to the participation of customers in corporate decision-making. Some research shows that it is possible in this way to achieve customer satisfaction and future retention (Bitner et al. 1990; Smith et al. 1999; Tax et al. 1998).

Dimension 7: co-learning

The sphere of co-learning has two core activities: sharing and feedback. The first consists in consumers' transfer of informations and of resources coming both from their previous experience and from external sources, traditionally divided into focal-firm, market-facing, private and public (Vargo and Lusch, 2008). Feedback, on the other hand, is the buyers' proposal of suggestions, recommendations and comments about service delivery. Both activities are addressed to the user himself and to the other entities within the service network.

Sharing allows customers to enter the most important moment of their immaterial encounter with suppliers. It is the stage in which knowledge as an operant resource able to ensure a sustainable competitive advantage – the key idea that dominates the paradigm of SD logic - is fundamental. Probably, in fact, at this stage the transfer of knowhow between user and provider can be launched to increase the skills of both players and simultaneously, to generate new knowledge for both. It represents a kind of knowledge different from the mere sum of the individual contributions, which creates unique, holistic value.

The idea of sharing, in particular knowledge, information and expertise related to the service domain owned by users' and transferred to providers, is introduced by Payne, Storbacka and Frow (2008) who identify a dual learning process, “double loop learning” (Argyris and Schön, 1978, p. 346). On the one hand consumers increase their knowledge through comparison with suppliers, on the other, providers can benefit from customers' experience. This circular path provides an individual and an organizational learning (Argyris and Schon, 1978): buyers tend to take advantage of acquired knowledge in future co-creation activities and, in parallel, suppliers can improve the design of the offerings thanks to the knowledge about consumers, with a perpetual growth of co-created value and a renewal of overall knowledge.

Similarly, Ballantyne and Varey (2006) emphasize the dialogic orientation underlying the co-creation of value, which gives shape to the “learning together” (Ballantyne, 2004, p.119), i.e. a mechanism of mutual understanding between all the subjects involved in service, even and

especially when these individuals understand the differences between them, when they agree to differ.

The second dimension attributed to co-learning is the feedback between user and provider, defined as the set of information requested and in particular unsolicited which users broadcast to the supplier and which helps the latter to improve service delivery in the long run (Groth, Mertens and Murphy, 2004).

Wostl and Hare (2004) identify among the positive effects of feedback recurrence the improvement of co-management strategies, i.e. the exercise of shared power between government and beneficiaries. For the Authors, the two-way relationship between users and providers encourages the mechanisms of learning by doing and learning from experience, which in turn increase the flexibility of a company, generating “social learning” (ibid, p.194), i.e. the processes of learning and change of a firm and its members.

Studying the relationship between feedback and value co-creation, Kishna et al. (2013) identify the real channels of co-creation, “a blend of strategic platforms for the consumers, where they engage with each other or with providers, using their personal or acquired resources, abilities and efforts to create and share value” (ibid, p.14), which in turn give rise to feedback.

With such a co-creation-based view, then, and in line with its bidirectional nature, one can include in this sub-dimension the suggestions or the general comments that customers provide for the improvement of service or for the redefinition of the offering, according to their evaluations and experiences. They are placed in a privileged position, being able even to guide employees during the course of supply, in virtue of their previous experience about service that makes them true “experts” in a certain field (Bettencourt, 1997). Inevitably, also companies can benefit from the entire process, being able to constantly modulate their offer according to contemporary consumers’ increasingly changing and elusive needs.

Dimension 8: connection

The interactive nature of SD logic originates from the strong influence that relationship marketing (Berry, 1985; Grönroos, 1994) exercised on the foundation of the theory itself.

Therefore, value co-creation is inextricably linked with bidirectional and dialogic interchange between user and supplier, which attaches great relevance to the user relationship network as added value for the exchange itself (Mele & Polese, 2011; Barile & Saviano, 2014). There are many authors who link the concept of co-creation to that of connection (Randall et al. 2011; Moliner et al. 2007). Vargo and Lusch (2004, 2008a) believe that value co-creation is realized through the integration of resources resulting from interactions with other participants.

Consequently, the final dimension of the value co-creation model developed here is represented by the connection, which corresponds to the effective relations between subjects.

Each person is part of a social network (customer's service network, McColl-Kennedy et al., 2012) from which the necessary support to deal with the service is derived. Resource integration thus takes place thanks to private sources (such as colleagues, friends, relatives), market-facing resources (other organizations or service providers) and public resources (Vargo and Lusch 2011).

Connection is essential for value co-creation because, as claimed by Grönroos and Voima (2013), it is a function of interaction. In agreement with the notion of *value-in-use* (Vargo and Lusch, 2004), it is only in the moment in which consumers' relational and cognitive capital intersects with that of providers that actual value can be generated.

Within this dimension two sub-dimensions can be distinguished: the first is relationship building, in which consumers establish links with suppliers; the second is relationship maintenance, even in post-delivery, on condition that these relationships are solid and trust-based (Palmatier, 2008).

The first sub-dimension reflects the differences between the various types of services. The extent of the relationship between the subjects of a service system may change depending on whether the bond is established with the supplier or with the other actors in the consumers' relational network and depending on its short or long-term nature. With reference to the banking service, for example, it is obvious that the degree of interaction with suppliers and with other consumers is lower than in a service whose intrinsic nature incentives relationships, such as in the education sector. In this field, in effect, in which the collective feature is inherent, the beneficiary is collocated in an environment with a strong communicative and interactional connotation.

The maintaining of relationships is also susceptible to differences between the different types of service, but mostly regarding the regularity with which service is delivered by the same supplier. In the case of the healthcare sector (Barile et al., 2012; Barile et al., 2014), customers can be sure to relate with the same individual and this involves the possibility of maintaining a more intense and long lasting relationships, with respect to a service in which suppliers are always changing (e.g. pilots, stewards and entertainers). Reiterating consumption increases satisfaction, which in the long-term can lead to loyalty (Palmatier, 2008).

Particularly important in the current dimension is the use of new technologies, which allow faster and more convenient resource integration (Scarfò & Palmieri, 2014).

This practice not only contributes to suppliers' empowerment, increasing their knowledge about users, but also produces positive effects on their modalities of approach with customers, on their tactics for customers' assistance and on the final value that they obtain.

From this point of view, connection contributes to create value both for providers - who can enhance their relationship with users, their power and can optimize their time - and for users who receive in this way better treatment and an improvement in their quality of life.

3. Discussion

Starting from a brief review of the efforts required customer value co-creation measurement, this work reveals a lack of consensus relative to the dimensions that measure the concept in question and proposes a conceptual model theoretically founded on Service - Dominant Logic.

The paper undertakes a discussion and a generalization of the activities that form the domain of value co-creation behavior and identifies the sub-dimensions that characterize each activity.

Based on the categorization elaborated by McColl-Kennedy et al. (2012) within the health sector, the current study suggests a conceptual model for the measurement of value co-creation behavior.

The work identifies eight dimensions (cerebral activities, cooperating, information research and collation, combination of complementary activities, changing habits, co-learning, co-production, connection) as components of value co-creation, each of them being divided into sub-dimensions.

As a result, it is possible to argue that consumer value co-creation is a multi-level process. In the process, each user has a different perception about its role in the service delivery and each one takes part in it with varying degrees of involvement, using different types of resources and mental, cognitive and social skills. This influences both strategic and operational aspects of enterprises.

The identification of the dimensions offers a tool for a better comprehension of the value co-creation process that implies the presence of multiple levels of interactions, all of them finalized to global value co-creation. These interactions result in a transversal cutting across the board of the various dimensions, which are not only strongly interrelated with each other, but also linked by relationships of bi-directionality.

Although the proposed model is based on hierarchical relationships (the basic concept includes dimensions which comprise several sub-dimensions), the concrete process of value co-creation is not hierarchical. In fact, the consumer does not follow a sequential order in performing the different co-creation steps, which may also be started simultaneously (fig. 2). This is true in particular for repeated or continued services (e.g. for those services that do not end before the single transaction, such as education or health care services).

For example, concerning co-production and co-learning, if during the latter, consumers, thanks to knowledge, are capable of altering the course of the service or capable of discovering potential

lacunae, the player will return to the level of co-production after learning new skills, suggesting changes needed to the service itself.

Moreover, there is also a bidirectional relationship between the activities of connection, co-learning and co-production. In fact, after the establishment of the relationship with the provider or with other users, consumers can enhance expertise on both the service and in general on the domain of the service, bringing such expertise to the co-delivery, thus returning first to co-learning, then to co-production. Cerebral activities, then, are transversal to almost the entire process, showing their effects especially at the level of connections and co-production.

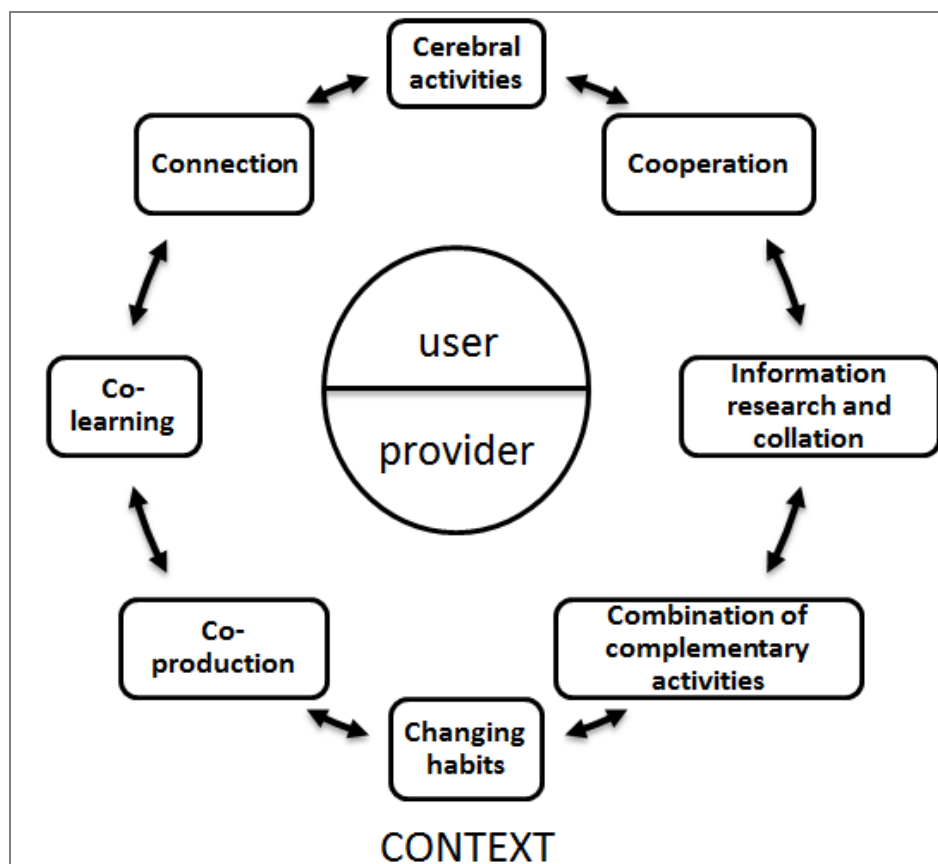


Fig.2 - Interactivity and circularity of value co-creation sub-dimension

The dimensions do not follow a rigid order, but activity by activity there is an increase in the degree of consumer participation and co-creation value. Although there are cross-references in terms of retroactive effect between the various stages, some of these are preliminary to the completion of the subsequent phase: for example, to really activate delivery, consumers need to seek preliminary information on how and when service is delivered and to connect consumer and provider. Entering into the heart of co-delivery obviously depends on both parties being involved.

In the second place, at the end of the process, particularly at the moment when this has produced a positive result, the path has to be recursive, i.e. the possibility that when consumers have had a positive experience and established a relationship with the provider based on trust this can be repeated. Not surprisingly, the last step of the scheme is connection, as maintaining relationships beyond the moment of service delivery will combine with the reiteration of buying behavior patterns and can generate loyalty in the long run.

Despite the lack of a strict order in the sequencing of activities, it seems possible to link them to four macro-dimensions that make it possible to divide delivery into several stages. As discussed in Section 2, there are certain dimensions that could be preliminary for the delivery and so they are included in the phase of pre -delivery (Fledderus, 2012). Customers have to maintain a positive attitude (cerebral activities), they need to understand the preliminary guidelines of providers (cooperation) and have to collect information about the service (information research and collation). Only in this way will they have access to the provision of the service (delivery) and can associate support activities to the service (combination of complementary activities), changing lifestyle (changing habits) to fit supply, where applicable.

Co-delivery (Bovaird & Loeffler 2012; Kannan & Chang, 2013) - the real moment of encounter between user and provider - coincides in particular with phases of co-production, co-learning and connecting. Only the establishing of a strong relationship between user and provider can lead to a repurchase, and to loyalty at a post –delivery level.

In accordance with value co-creation, three further steps in addition to the elements identified by McColl-Kennedy et al. (2012) are discussed: the circularity of the process, the supposed bidirectional connection between the activities and the allocation of the same at different stages of supply (fig . 3).

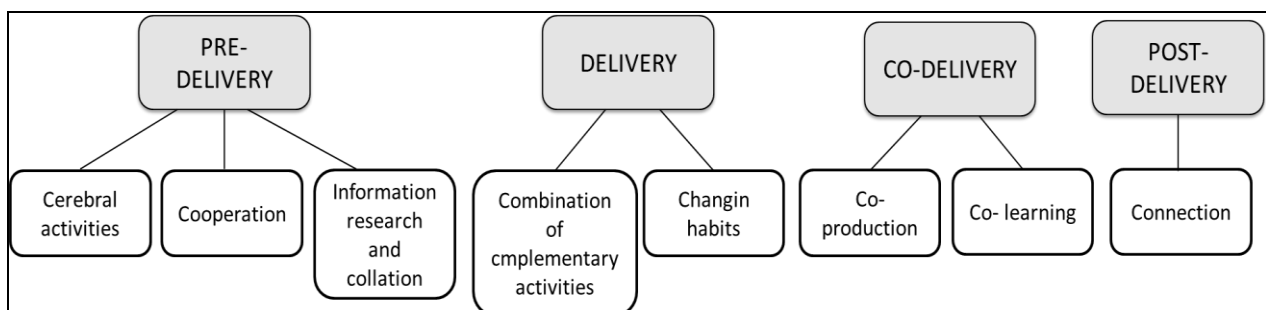


Fig.3 - Value co-creation activities divided into four provision phases

The developed scheme could be a useful contribution to the management literature, mainly for two reasons.

First, the model embraces a holistic and therefore systemic vision (Polese et al., 2011; Wieland et al., 2012; Pels et al., 2012) that allows the identification of a possible correlation between the various activities.

This view also goes beyond the identification of a series of unconnected dimensions, considering value co-creation as a consistent connection between the cerebral, emotional, cognitive and social aspects of consumption by both consumers and provider. Furthermore, while previous studies pivot on a theoretical description of the activities of co-creation, this paper contributes to enriching existing works on value co-creation, showing the practical implications of the dimensions framed.

For example, value co- production is divided here into two sub-dimensions: co- designing and service recovery, the latter contained within a wider category of co-delivery. Moreover, given the importance of the cognitive component in dialogic exchanges between user and provider, the conceptual model gives a central role both to preliminary information seeking about the service, independently performed by the consumer, and co-learning tracking subsequently, knowledge that can lead to the ongoing process of delivery.

Not surprisingly, the customer is a contemporary “prosumer” (Toffler , 1980, p. 342) who, having more tools other than one sole source of corporate communication, moves deftly during the purchase decision, often thanks to his own personal contacts, enabling the acquiring of new skills .

4. Implications and future research

The model above has interesting implications for both managers and researchers.

First, a scheme that distinguishes the concrete value co-creation activities offers businesses a tool for better management of the process itself. In this regard, of some use may be the specification of the real co-production activities undertaken by the consumer, defined in two categories (co-design and co-delivery) derived from SD logic, where McColl - Kennedy et al. (2012) propose a too particularistic classification, linked only to some specific interviews conducted on a sample of patients.

The identification of value co-creation dimensions and sub-dimensions is of great value for decision makers who can adopt behaviors aligned to each stage of the process and identify practical and coherent instruments aimed at encouraging the involvement of users.

For example, the central sub-dimension of co-design has as a direct consequence the possibility for companies to implement measures encouraging innovation, from the traditional focus groups and workshops to the latest storyboard, realistic illustrations of particular situations that occur during delivery and addressed to specific types of customers that are then submitted to users. Similarly, with respect to co-delivery, instead, the creation of intelligent platforms, ever more present in the

public sphere could be envisaged, i.e. technological infrastructure that aims to promote the inclusion of citizens in service provision and to create real information networks between the stakeholders (customers, providers, other companies, organizations and institutions involved) (Mele et al, 2012). The second consequence concerns the practical benefits for the management of relationships with buyers and especially for the determination of the various customers' degree of involvement. It follows that the conceptual model lends itself also to user segmentation.

In conclusion, a conceptual model for value co-creation measurement can influence the direction of future research, allowing not only to better articulate the construct in the light of a scale based on the dimensions and sub-dimensions outlined in this paper, but can also lead to the identification of relationships with other relevant variables in the context of marketing and consumer research. In other words, from an empirical point of view, this work is, in fact, a starting point for developing a value co-creation scale that has to be empirically validated through the study of the correlation with other dimensions which relate to the concept in question, as is usual practice in psychometrics to test its nomological validity.

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