

# Toward a Service (Eco)Systems Perspective on Value Creation

*Heiko Wieland, University of Hawaii, USA*

*Francesco Polese, University of Cassino, Italy*

*Stephen L. Vargo, University of Hawaii, USA*

*Robert F. Lusch, University of Arizona, USA*

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## ABSTRACT

*This article discusses how the core concepts of service-dominant logic—service-for-service exchange, value co-creation, value propositions, resource integration, and highly collaborative relationships—point to a generic actor conceptualization in which all actors engaged in exchange (e.g., firms, customers, etc.) are viewed as service providing, value-creating enterprises. In other words, all social and economic actors are essentially doing the same thing: creating value for themselves and others through reciprocal resource integration and service provision. The authors suggest that this generic actor-to-actor (A2A) orientation, in turn, points toward the dynamic and systemic nature of social and economic exchange. To account for the complexity, indeterminacy, and viability of these dynamic systems, they highlight the importance of general systems theory, complexity theory, and the viable systems approach and propose that cross-disciplinary scholarly efforts are necessary in order to develop models and frameworks that can simplify the complexity of social and economic exchange in meaningful ways and ultimately inform practice and public policy.*

*Keywords:* Actor-to-Actor (A2A), Exchange, Service Models, Service-Dominant Logic, Service-for-Service Exchange, Value Co-Creation

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## 1. INTRODUCTION

In today's progressively complex and interconnected world, it is becoming increasingly clear that all actors rely on voluntary exchange of applied skills and competences for their mutual well being (Vargo & Lusch, 2004, 2008a). However, while the networked and systemic nature of this exchange is increasingly recognized, the full extent of the interconnected, massively

collaborative, and systemic nature of value (co) creation seems to be often underappreciated and not well understood. A key component of this systemic approach is the notion that all social and economic actors are essentially doing the same thing: creating value for themselves and others through reciprocal resource integration and service provision. That is, though we have been conditioned to think otherwise by the traditional logic of economic exchange and the related academic silos that are often based on this logic, the disparate actor categories of

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“producer” and “consumer” are artificial and restrict understanding (Vargo & Lusch, 2011a; Vargo, Maglio, & Akaka, 2008).

However, as suggested in Vargo and Lusch (2011a), academic thought from many disciplines is evolving toward a new and needed logic of and for the market (and society), what has now become called “service-dominant (S-D) logic.” We see this continuing, collaborative movement as an important contribution toward a more-unified, theoretical conceptualization and framework, in which service provision is viewed central to value creation and holistically, embedded in reciprocal systems of exchange.

Arguably, the first step toward a systemic understanding was the transcending conceptualization of “service” to overcome the “goods” versus “services” divide and the related, refocused notion that “it is all about service” (Vargo & Lusch, 2004, 2008a). A further, more recent step has been the replacement of the separate concepts of a “producer,” as a creator of value, and a “consumer,” as a destroyer of value, with a more generic conceptualization of economic (and social) actors who reciprocally create value in complex systems, what we call “service ecosystems” (Vargo & Lusch, 2011a) and what “service science” (e.g., Maglio & Spohrer, 2008) refers to simply as “service systems.” Though there are nuanced differences, the core conceptualizations are similar in form and intent. The objective of this paper is to further explore the thinking behind this holistic, dynamic, and systemic view of value creation in S-D logic and service science. Furthermore, we will show that value can be conceptualized in terms of a change in the viability of a system and explore some of the directions necessary to further understand its contextual and systemic nature.

We structure this paper as follows: First, we briefly contrast G-D and S-D logic and reiterate how the latter provides a more robust theoretical foundation for social and economic exchange (see also Vargo & Lusch, 2004, 2008a) than the former. We then highlight the importance of systemic thought and introduce the “service ecosystem” concept and note why

an actor-to-actor (A2A) orientation is essential to the ecosystem perspective.

Second, we suggest that, a fuller exploration of the dynamic and complex nature of service (eco)systems requires drawing on other systems perspectives, such as general systems theory (GST), complexity theory, and the viable systems approach (VSA). Essentially, we suggest that S-D logic and service science both point toward a need for a systemic understanding of value and value creation and that drawing on the mentioned systems theories can help us to better understand value creation processes.

## 2. GOODS-DOMINANT LOGIC

Vargo and Lusch (2004, 2008a) distinguish between two main perspectives on economic exchange and value creation. The traditional view is based on the underlying assumption that goods—units of output—are the bases for exchange. The root of this traditional perspective, referred to as “goods-dominant (G-D) logic,” can be traced back at least to Smith (1776) and his seminal work on *The Wealth of Nations*. In the context of the eighteenth century, with its limitations on personal travel and lack of electronic communication, Smith viewed the export of tangible goods (products) as the primary source of national wealth and reserved the word “production” to refer to their creation. This goods-centered view took hold and formed the foundation for economic science and, later, for the business disciplines, including marketing thought (Vargo & Morgan, 2005).

According to G-D logic, the purpose of a firm is the production and distribution of units of output (products, goods), which are seen as having become *embedded with value* during the production (manufacturing, or agricultural or extraction) process. In G-D logic, the customer is thus seen as a “consumer,” or destroyer of the value created by the firm (Normann, 2001). “Services” (usually plural) are, through a G-D logic lens, either viewed as add-ons to goods (e.g., after-sale service) or special types of products and are often treated as somewhat

inferior “goods” that possess qualities (e.g., intangibility, involvement of the customer in production, inability of being standardized and inventoried) that pose efficiency challenges for the firm’s productive activities. The academic community has addressed these sub-units of production through the establishment of sub-disciplines, such as services marketing and services operations to deal with their particular characteristics.

### 3. SERVICE DOMINANT LOGIC

As mentioned, the foundational difference between S-D logic and G-D logic is the conceptualization of “service.” Whereas in G-D logic, “services” (plural) are defined as units of output, S-D logic defines “service” as the application of competences (knowledge and skills) for the benefit of another party. The use of the singular “service” signals a shift not only from thinking about value creation in terms of outputs to processes and outcomes but also in thinking about the primacy of resources involved from operand resources to operant resources. *Operand resources* (e.g., natural resources) are usually tangible and static resources that require some action to make them valuable. *Operant resources* (e.g., human skills and knowledge), on the other hand, are usually intangible and dynamic resources that are capable of acting on operand and other operant resources to create value (Constantin & Lusch, 1994).

In contrast to G-D logic, which views services as somewhat inferior units of output (as opposed to goods), S-D logic views service as an essential, collaborative process. Service provision is conceptualized as “the ongoing combination of resources, through integration, and their application, driven by operant resources — the activities of actors” (Vargo & Lusch, 2011a, p. 184). More specifically, all actors are seen as integrating resources from a combination of private sources (i.e., self, friends, family), market-facing sources (i.e., from other entities, through barter or economic exchange), and public sources (i.e., collective

access from communal and governmental sources) through service provisions. Therefore, except in a relative sense (i.e., the perspective of a specific party in a specific transaction), the producer-consumer distinction vanishes (Vargo, 2009; Vargo & Lusch, 2011a), since, in S-D logic, all entities involved in an economic exchange are considered resource integrating, service-providing enterprises (FP1 and FP9) (Vargo & Lusch, 2008a).

Service exchange enables actors not only to access resources for their own benefits but, through integration, to create new and exchangeable resources in the process. Vargo and Lusch (2004) highlight this fact by stating that “resources are not: they become.” The usefulness of any particular potential resource must be viewed as highly contextual. In other words, *value is always uniquely and phenomenologically determined by the beneficiary* (FP10) (Vargo & Lusch, 2008a) since every beneficiary’s unique context moderates the access to other potential resources, and the ability and willingness to integrate them. Thus, the beneficiary is always an *active participant of the value creation process*, that is, a co-creator of value (FP6) (Vargo & Lusch, 2008a).

### 4. S-D LOGIC AND SYSTEMS THINKING

As stated, S-D logic views service provisions as the ongoing combination of resources, through integration, and their application. This thought leads to a network-with-network conceptualization of resource integration since these mutual service provisions require operant resources—knowledge and skills—from actors involved in and external to the exchange. These provider and customer networks are similar to Gummesson’s (2006) “many-to-many” marketing concept. In contrast to many other network conceptualizations, which are provider centric, that is, they focus primarily on networks that provide firms with resources, S-D logic sees the “customer” and the customer’s resources as not only integral to but primary in the value co-creation process.

However, Vargo and Lusch (2011a, p. 5) argue that “as much as the idea of resource networks contribute to the understanding of value creation and context, its consideration sometimes lacks a critical characteristic of systems, which are dynamic and potentially self adjusting and thus simultaneously functioning and reconfiguring themselves.” In other words, a system view differs from a network view in that each instance of resource integration, service provision, and value creation, changes the nature of the system to some degree and thus the context for the next iteration and determination of value creation.

In an attempt to more fully develop this complex, higher-level system framework, S-D logic scholars (e.g., Lusch, Vargo, & Tanniru, 2010; Vargo, 2009) have used the term “service ecosystems<sup>1</sup>”: “relatively self-contained, self-adjusting systems of resource-integrating actors connected by shared institutional logics and mutual value creation through service exchange” (Vargo & Lusch, 2011b). These ecosystems are constantly adapting to changing contextual requirements and are simultaneously creating these changing contexts in the process (e.g., Giddens, 1979). Contextual value creation (value-in-context) in these systems can also be conceptualized as an increase in the viability (survivability and well-being) of the system.

## 5. S-D LOGIC AND SERVICE SCIENCE

As noted, the shift to a dynamic systems view of mutual service provision is not exclusive to S-D logic. IBM’s “service science” project, for instance, serves as another prominent example. IBM, as part of its transition to a service focused company, started the Service Science, Management and Engineering (SSME) initiative to better understand the role of service. This long-term project, often referred to as service science, was aimed to connect a broad range of academic institutions and practitioners in order to advance service thinking.

Maglio and Spohrer (2008, p. 20) suggest that the ultimate goal of service science “is to

apply scientific understanding to advance our ability to design, improve, and scale service systems for business and societal purposes (e.g., efficiency, effectiveness, and sustainability).” The importance of seamless and reliable service systems design is highlighted by the fact that these systems are increasingly becoming more complex and global. Spohrer et al. (2007) define a service system, the basic unit of analysis, as a dynamic value co-creation configuration of resources, including people, organizations, shared information (language, laws, measures, methods), and technology, all connected internally and externally to other service systems by value propositions (Spohrer et al., 2007). Maglio and Spohrer (2008) characterize service systems in the following way (p. 18): “The smallest service system centers on an individual as he or she interacts with others, and the largest service system comprises the global economy. Cities, city departments, businesses, business departments, nations, and government agencies are all service systems. Every service system is both a provider and client of service that is connected by value propositions in value chains, value networks, or value-creating systems.” Thus, every service system has a unique identity and is an instance of a type or class of service systems (e.g., people, businesses, government agencies, etc.) while multiple service systems, at the same time, are often overlapping and nested. The history of a service system is a sequence of interaction episodes with other service systems in which service systems act as resource integrators of operand and operand resources (Vargo & Lusch, 2006), supplied either from within an organization or through external networks (Kothandaraman & Wilson, 2001; Spohrer et al., 2008).

As Maglio and Spohrer (2008, p. 19) suggest, service-dominant logic provides “the right perspective, vocabulary, and assumptions on which to build a theory of service systems, their configurations, and their modes of interaction. Simply put, service-dominant logic may be the philosophical foundation of service science, and the service system may be its basic theoretical construct.” Both service science and S-D logic

therefore point to a systemic nature of value creation.

## 6. A NOVEL MARKETING VIEW OF A2A INTERACTIONS

As stated, we suggest that the conceptualization of a transcending “it is all about service” logic has not only helped to overcome the “good” versus “services” divide but also the somewhat nested “producer” versus “consumer” divide (Vargo & Lusch, 2008b). More specifically, the notion that all social and economic actors are resource integrators is one of the key tenets of S-D logic. Thus, all parties involved in economic exchange are, similarly, resource-integrating and service-providing enterprises that have the common purpose of value co-creation. To reflect this common purpose, Vargo and Lusch (2011a) have recently started to use a generic “actor-to-actor” (A2) designation.

A short historic examination can help to explicate and fully appreciate the complexity of the producer-consumer divide and to further highlight the fact that we need to draw on systems theory to better understand A2A relationships. One of the early forms of social exchange was barter, a direct service-for-service exchange, in which each actor provided a reciprocal service provision for another actor. In the barter economy, the producer-consumer distinction was trivial, if not nonexistent, since each party was clearly and directly providing a service for the other party. However, with the introduction of the monetary system, the business-versus-consumer (producer-consumer) distinction became more prominent. The use of money created indirect exchange in which organizations (i.e., “business firms”) became separated from “households” due to the increasing use of intermediaries such as merchants. In indirect exchange, one party, the “producer,” does something for another party (“consumer”) relatively directly, while the latter party provides only an indirect benefit (money). This money is usually obtained by providing a direct benefit to a third party. As a result, the symmetry that was

clearly salient in the barter exchange has become blurred. In today’s monetized economies, the exchanging parties seem to be playing different roles, even though they still provide and receive mutual benefits. The mutual service provision, however, is masked by the indirect exchange. Vargo and Lusch (2004) capture this notion in another tenet of S-D logic: indirect exchange masks the fundamental basis of exchange.

Smith (1776/1904) used the producer and consumer distinction only to highlight the fact that consumption was the sole purpose of production. He did not view producers and consumers as characteristically different kinds of actors, but, in a more circular conceptualization, viewed economic actors as both, “producers” and “consumers.” This conceptualization mirrors that of barter exchange in which producers and consumers are only distinguishable from the limited perspective of a respective party for a particular benefit provided and obtained through the “division of labor.”

However, Smith’s work created a specific meaning of the term “productive” which he related to activities that contributed to the creation of surplus tangible goods that could be exported. His view of “productivity” was subsequently adopted by economic philosophers who incorporated it into economic science. Thus, Smith did not only contribute to the creation of the producer-consumer divide, but also, as stated, to the introduction of G-D logic.

As mentioned, the goods-centered G-D logic was foundational for all business disciplines and took hold for more than two centuries. Vargo and Lusch (2011a) credit contributions made by B2B marketing (and other sub-disciplines) with helping to overcome some of the inadequacies of G-D logic and with pointing to an A2A orientation. B2B marketing, by definition, is concerned with similar actors (enterprises) and, although somewhat implicitly, rejects the notion of (endogenous) value destroying consumers. As early B2B marketing scholars perceived their discipline as a unique sub-discipline, a logical first task was an attempt to identify the differences between their work and B2C

marketing (i.e.; derived demand, professional buyers, product categories, etc.). Over time, however, the validity of these distinctions has been challenged (e.g., Fern & Brown, 1984; Cova & Salle, 2008).

More recently, many B2B scholars have criticized and called for a reevaluation of the divide between B2B and mainstream marketing (e.g., Gummesson & Polese, 2009; Dant & Brown, 2008). The IMP group (e.g., Håkansson & Snehota, 1995), for example, introduced an interactive network orientation which helped to overcome the dyadic perspective of exchange. Exchange is further seen as interactive and relational (e.g., Gummesson, 2006), rejecting the idea of one entity acting on the other through one-way flow models (Ulaga & Eggert, 2006; Ballantyne & Varey, 2008) and promoting more rewarding and longer lasting relationships. This research stream was also foundational in (at least partially) replacing the producer-consumer divide. It contributed to this task by introducing the economic-actor-to-economic-actor perspective (e.g., Håkansson & Prenekert, 2004).

In this section, we have shown that the integration of S-D logic's foundational premise that value is always co-created (Vargo & Lusch, 2004) and the A2A orientation (Vargo & Lusch, 2011a, p. 182) "point away from the fallacy of the conceptualization of the linear, sequential creation, flow, and destruction of value and toward the existence of a much more complex and dynamic system of actors that relationally co-create value and, at the same time, jointly provide the context through which "value" gains its collective and individual assessment" (Giddens, 1984, p. 25; Slater, 2002, p. 60). This novel view of the normalized actor helps us to make the collaborative, systemic nature of value creation and its implications for marketing theory and practice more salient. This non-linear, interconnected and dynamic view of value co-creation fits well with the described systems orientations. In the following sections, we highlight the need for adopting a holistic

and unifying perspective to fully understand the complexity of these open adaptive systems.

## 7. COMPLEX SERVICE SYSTEMS

Before we continue the analysis of how systems thinking contributes to the understanding of value creation, it is useful to look at service system thought in more detail. Maglio, Vargo, Caswell, and Spohrer (2009, p. 9) suggest that "a system is a configuration of resources, including at least one operant resource, in which the properties and behavior of the configuration is more than the properties and behavior of the individual resources." They further point out that value is viewed as an improvement in a system as determined by the system or by the system's ability to adapt to an environment. In other words, value can be conceptualized as improved system viability.

Thus, it can be inferred that service ecosystems must be conceptualized as "open systems (1) that are capable of improving the state of another system through sharing or applying resources (i.e., the other system determines and agrees that the interaction has value), and (2) capable of improving its own state by acquiring external resources" (Maglio, Vargo, Caswell, & Spohrer, 2009). As stated, a service ecosystem is composed of heterogeneous entities, interacting with each other to achieve shared goals. Businesses, firms, and customers are hence all viewed as socio-economic actors who connect through value propositions within "complex service systems" and perform actions aimed at reaching desired outcomes, such as mutual value creation through co-created solutions and experiences.

We suggest that complexity theory can help to increase understanding of service systems since these systems not only involve numerous actors with dynamic interactions, but also, as highlighted by the primacy of operant resources, place human actors rather than physical goods

in the center of their organizational structure and operations (Qiu, 2009). Human systems are generally characterized by open and emergent interactions that often generate conditions of complexity (Sterman, 2000; Sawyer, 2005). Holbrook (2003) points to the importance of complexity theory for marketing and suggests that the concept of the complex adaptive system is the single most important idea in all of complexity theory for this field. He defines a complex adaptive system as being “composed of inter-related parts, interacting with its environment, subject to resulting feedback effect, evolving over time adaptively to fit the pressures imposed on it, perhaps attaining a sustainable advantage, and in the process generating certain emergent phenomena” (Holbrook, 2003).

S-D logic recognizes the complex nature of higher-level service systems (e.g., Lusch, Vargo, & Tanniru, 2010; Vargo, 2009), as shown by the conceptualization of the service ecosystem. These complex service systems often rely on communication technologies to enable reconfigurations and to create a basis for systematic service innovation (IfM & IBM, 2008; Basole & Rouse, 2008; Demirkan et al., 2008). Due to the recent proliferation of digital communication and computation, most informational resources now have the potential of being liquefied and physical control or ownership of these resources is often unnecessary (Lusch, Vargo, & Tanniru, 2010). Although S-D logic suggests that there is no service revolution and that knowledge has always been the driver for service provision, the liquefaction trend has highlighted the fact that we are experiencing an “information revolution” (see also Rust & Thompson, 2006).

Complex service systems are everywhere (from healthcare service to traffic management, from smart power supply to food production, from telecommunication to waste management) and their performance impacts the service experience of all human actors. Hence, an increased understanding of the underlying logics of these complex systems is necessary to further advance the frontiers of service research (Barile & Saviano, 2010; Gummesson, Mele, & Polese, 2009, 2011; Ng, Parry, Maull, & McFarlane, 2010).

## **8. GENERAL SYSTEMS THEORY AND THE VIABLE SYSTEMS APPROACH AND THEIR CONTRIBUTION TO THE UNDERSTANDING OF VALUE CO-CREATION**

Foundational to systems thought was Von Bertalanffy's introduction of general systems theory (GST) in the late 1920s (Bogdanov, 1922, 1980; Von Bertalanffy, 1968, 1972; Lazlo, 1996; Meadows, 2008). GST can be described as an interdisciplinary theory about any system in nature and society regardless of scientific domains, as well as a useful framework to investigate phenomena with a holistic approach (Capra, 1997). Von Bertalanffy (1968, p. 38), defines GST as “a logical-mathematical discipline, in itself purely formal but applicable to the various empirical sciences. For sciences concerned with ‘organizational wholes,’ it would be of similar significance to that which probability theory has for sciences concerned with ‘chance events’; the latter, too, is a formal mathematical discipline which can be applied to most diverse fields, such as thermodynamics, biological and medical experimentation, genetics, life insurance statistics, etc.”

Based on GST, observers focus on understanding phenomenon holistically instead of applying reductionist views that are only concerned with the elementary components (Von Bertalanffy, 1968). GST, like complexity theory, emerged from the realization that a reductionist view of the world, where objects and events could be understood in terms of their constituent parts and where these parts fit together like cogs in a machine, could not adequately capture the complexity of adaptive systems (Faulkner & Russell, 2003).

GST utilizes a logical and formal approach to analyze and describe the phenomena under investigation and thus is applicable to numerous scientific disciplines with distinct and disparate conceptualizations and areas of focus (Boulding, 1956; Maturana & Varela, 1975). One of the first introductions of systems thinking into marketing research was Alderson's (1965) at-

tempt to utilize GST to develop a general theory of marketing. Subsequent work has continued to highlight the importance of systems in various areas of this field (e.g., Dixon, 1984; Dowling, 1983; Layton, 2007). Systems theory is also receiving increasing attention in service research (e.g., Ng et al., 2012) due to its contribution to understanding complex phenomena (Beinhocker, 2006) such as co-creation, service exchange and service systems (Barile & Polese, 2010a; Polese, 2010; Ng et al., 2012).

We suggest that system theory can provide a powerful perspective and methodological lens for the analysis of service exchange and value co-creation. Service exchange and value co-creation need to be viewed as complex phenomena due to the fact that, as discussed, A2A relations characterize value co-creation as embedded in multi-agent systems with converging contributions. As discussed, we equate *value*, in these systems, to an *increase in viability* (i.e., survivability and well-being). This notion of value as system viability leads us to further draw on the viable systems approach ( $\nu SA$ ) to strengthen our understanding of service provisions in service ecosystems.  $\nu SA$  (Golinelli, 2000, 2010; Barile, 2000, 2011) is a research and governance methodology that is rooted in systems thinking which is based on the Viable Systems Model of Stafford Beer (1984).

$\nu SA$  offers general reference schemes that are useful in interpreting the concept of complexity, highlighting its systemic nature, and that can support the investigation of the general implications of complexity for decision making in service systems (Barile, 2009; Saviano & Berardi, 2009).  $\nu SA$  is also a governance methodology according to which enterprises (including individual actors) can be viewed as viable systems aiming at surviving in their context by creating conditions of relational consonance (harmony) with the sub and the supra-systems that are perceived to be relevant for the functioning of a system (Golinelli, 2010). As a methodological tool,  $\nu SA$  has proposed ten fundamental concepts (Barile & Polese, 2010b, 2011). In this paper, we will highlight the five concepts that provide a deeper understanding of

service exchange in general and A2A relations within value co-creation in particular (see Table 1; for a complete list of all ten fundamental concepts, see the Appendix).

Similar to service systems, which are the basic abstraction of service science (Maglio, Vargo, Caswell, & Spohrer, 2009),  $\nu SA$  claims that all entities (individuals, consumers, organizations, or communities) should be perceived as systems that are made up of interlinked sub-components that strive towards a common goal. An important concept of  $\nu SA$  is the notion of an enterprise as a viable system—that is, an enterprise is a viable system if it has the ability to increase its capacity of survival continuously over time. According to  $\nu SA$ , this is the ultimate goal of all economic actors as systems. Achieving this goal depends on the efficacy and efficiency of the interactions among the component parts of the system within every business context. It is therefore apparent, from the discussion, that  $\nu SA$  focuses on the analysis of relationships among socio-economic actors in search of viable interacting conditions (Golinelli, 2010; Barile, 2000). In doing so,  $\nu SA$  not only enables an analysis of the relationships among an enterprise's internal components, but also among the relationships between enterprises and other systemic actors in their environment.

$\nu SA$  supports S-D logic by introducing the intuitively appealing consonance and resonance concepts. As stated, “consonance” describes the potential compatibility between systems elements and “resonance” the harmonious interaction among actors in service interactions. The two concepts represent a model describing ideal and rewarding co-creational exchanges among actors, and thus, echo S-G logics foundational premise (FP8) which states that “[a] service-centered view is inherently customer oriented and relational (Vargo & Lusch, 2008a, p.7).” Interactivity, integration, customization, and co-creation are the hallmarks of a service-centered view and its inherent focus on the customer (Mele & Polese, 2011; Mele, Russo Spena, & Colurcio, 2010).



Table 1. Implications from *vSA* for value co-creation

| <i>vSA</i> fundamental concept                | Implications for value co-creation                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FC 3: Reductionism and holism                 | A full understanding of the market and the co-creation interaction requires <i>both</i> a holistic view of the whole <i>and</i> the analysis of individual elements and their relationships.                                                                                                                                                                                   |
| FC 4: Open systems and systems boundaries     | Modern marketing theory recognizes that enterprises do not create value in isolation. There is now increasing recognition of A2A roles played by multiple actors and interested parties in various value co-creation processes within a customer balanced centrality. The notion of co-creation is inherently associated with vanishing borders between actors within markets. |
| FC 7: Consonance and resonance                | Consonance (potential compatibility between systems elements) and resonance (harmonious interaction among actors in service interactions) represent a model describing ideal and rewarding co-creation exchanges among actors of service experiences.                                                                                                                          |
| FC 9: Adaptation and relationship development | Service systems seek to establish positive and harmonious interactions with other systems to strengthen value co-creation processes and experiences. Positive interactions between providers and customers are dynamic and always changing as subjective judgments vary with time.                                                                                             |
| FC 10: Complexity and decision-making         | Marketing theory is increasingly focused on networks of relationships within which interactions take place. The complexity of such networks is a problem in terms of the knowledge and cognitive alignment that is required between the decision-makers' system and the observed reality.                                                                                      |

The methodological tools and reference schemes of *vSA* provide additional insights for dealing with the complexity of these systems and for the analysis of viability of service systems (Badinelli et al., 2012; Golnam, Regev, & Wegmann, 2011). Furthermore, a *vSA* lens also supports our claim that the generic term "actor" more accurately describes the fact that all social and economic actors are essentially doing the same thing as they create value for themselves and others through reciprocal resource integration. Using the *vSA* vocabulary, all actors similarly strive for survival in their specific context by creating conditions of relational consonance (harmony) with their sub and supra-systems.

## 9. CONCLUSION AND FUTURE DIRECTIONS

A robust conceptualization of 'service,' coupled with a systemic understanding of its provision, is essential to the understanding of markets and the co-creative nature of value. We con-

trasted two distinct lenses (G-D and S-D logic) through which social and economic exchange can be viewed, and we proposed S-D logic, which considers service, the process of using one's resources to create value with and for the benefit of another actor, as the fundamental basis of exchange. We argued that, based on S-D logic, all social and economic actors need to be conceptualized as service providing and value creating enterprises since all "actors" are essentially doing the same thing as they create value for themselves and others. In other words, the current paper highlights the notion that the entities that are involved in dynamic, reciprocal social and economic exchange do not fit neatly into categorical roles with different motives, needs, and desires. Instead, the core concepts of S-D logic such as service-for-service exchange, value co-creation, value propositions, resource integration, and highly collaborative relationships point to a more generic actor conceptualization in which all actors are, in very similar ways, trying to improve their well-being and viability as they go about the business of their daily lives. These activities are enabled and

structured by families, firms, neighborhoods, subcultures, political units and other societal groups and systems which connect actors and provide the context for their activities.

We suggest that an A2A orientation points toward the dynamic and systemic nature of value creation and that such an orientation can ultimately inform practice and public policy. Vargo and Lusch (2011a) have started to address this systemic nature of value creation in their work on service ecosystems. In the current research, we have extended this work by highlighting the importance of general systems theory, complexity theory, and the viable systems approach. We believe that these and similar theories and approaches can help us to understand the complexity, indeterminacy, and system viability of service ecosystems. It is important to note, however, that this research stream is still in its infancy.

We believe that the open-sourced nature of S-D logic has been a big part of its success. Similarly, we wish to invite other scholars to contribute to the evolution and development of a better understanding of the collaborative, systemic nature of value creation. We believe that only a collaborative effort from such diverse academic disciplines such as marketing, economics, sociology, social psychology, physics, and ecology can provide the degree of cross-fertilization that is needed to provide models and tools that can simplify the complexity of social and economic exchange in a meaningful way without eliminating the richness that systemic A2A relationships provide.

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This article draws on and extends previously published S-D logic publications.

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## ENDNOTES

- <sup>1</sup> The service ecosystem definition used here is a slight evolution from Vargo and Lusch's (2009, 2011a) earlier work.

## APPENDIX

### *Implications from vSA for value co-creation*

| <b>vSA fundamental concept</b>                      | <b>Implications for value co-creation</b>                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FC 1: Systems approach                              | A2A relationships are all intended to be relationships among customers, business, communities. All these actors can be seen as systems.                                                                                                                                                                                                                                         |
| FC 2: Systems hierarchy                             | A full understanding of the market and the co-creation interaction requires both an holistic view of the whole and the analysis of individual elements and their relationships.                                                                                                                                                                                                 |
| FC 3: Reductionism and holism                       | A full understanding of the market and the co-creation interaction requires <i>both</i> a holistic view of the whole <i>and</i> the analysis of individual elements and their relationships.                                                                                                                                                                                    |
| FC 4: Open systems and systems boundaries           | Modern marketing theory recognizes that enterprises do not create value in isolation. There is now appropriate recognition of A2A roles played by multiple actors and interested parties in various value co-creation processes within a customer balanced centrality. The notion of co-creation is inherently associated with vanishing borders between actors within markets. |
| FC 5: Autopoiesis, homeostasis, and self-regulation | Co-creation A2A relationships imply a dynamics in every service exchange, hence every actor's internal capacity to evolve and self-regulate in order to adapt to external stimuli.                                                                                                                                                                                              |
| FC 6: Structures and systems                        | Co-creation is a process, a dynamic exchange. It may be better analyzed when acknowledging that its structural (static) elements have to be observed also when interaction takes place, thus observing the system in action (dynamic).                                                                                                                                          |
| FC 7: Consonance and resonance                      | Consonance (potential compatibility between systems elements) and resonance (harmonious interaction among actors in service interactions) represent a model describing ideal and rewarding co-creation exchanges among actors of service experiences.                                                                                                                           |
| FC 8: Systems viability                             | Every actor in a market attempts to behave in a viable, sustainable, and harmonious manner in pursuit of its own goals. Co-creation is thus linked to actors' viable behaviour.                                                                                                                                                                                                 |
| FC 9: Adaptation and relationship development       | Service systems seek to establish positive and harmonious interactions with other systems to strengthen value co-creation processes and experiences. Positive interactions between providers and customers are dynamic and always changing as subjective judgments vary with time.                                                                                              |
| FC 10: Complexity and decision-making               | Marketing theory is increasingly focused on networks of relationships within which interactions take place. The complexity of such networks is a problem in terms of the knowledge and cognitive alignment that is required between the decision-makers' system and the observed reality.                                                                                       |