

# Service-Dominant Logic: Backward and Forward

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## INTRODUCTION

It has been a little over 15 years since the first article was published on what has become known as ‘service-dominant (S-D) logic’ (Vargo and Lusch, 2004). The initial, core ideas were rather simple and straightforward. First, marketing activity (and economic activity in general) is best understood in terms of *service-for-service* exchange, rather than exchange in terms of goods-for-goods or goods-for-money. In other words, it is about the benefits emanating from the resources, such as specialized knowledge and abilities, that people use for themselves and each other (i.e., service, applied resources), not the goods that are only occasionally used in the transmission of this service, that represent the source of value and thus the purpose of exchange.<sup>1</sup> Second, value is cocreated by multiple actors, rather than created by one actor and subsequently delivered.

As with all ‘new’ ideas, neither of these was entirely new (cf. Arthur, 2009). Likewise,

the credit for the development of S-D logic extends considerably beyond Vargo and Lusch. That is, its roots and development are both much deeper and more extensive. S-D logic is usually contrasted with *goods-dominant (G-D) logic* – an orientation that sees economic activity in terms of the exchange of goods for goods or goods for money – but, as discussed elsewhere (Vargo and Morgan, 2005, reprinted as Chapter 2, this *Handbook*), G-D logic is arguably as much an aberration of the Industrial Revolution as it is a deliberately considered orientation. That is, the central importance and role of service has been recognized at least as far back as Aristotle. Even Smith (1776 [1904]), to whom G-D logic can be at least partially attributed, actually laid out a model of economic activity that resonates quite well with S-D logic, before turning to the real purpose of his book: the creation of national wealth, through the trade of surplus tangible goods, in the context of a nascent Industrial Revolution (Vargo and Morgan, 2005). Furthermore,

in the midst of the Industrial Revolution, a number of economic scholars that followed Smith argued for a service(s)-based understanding. For example, Bastiat (1848/1964: 61–2) argued ‘the great economic law is this: *Services are exchanged for services....* It is trivial, very commonplace; it is, nonetheless, the beginning, the middle, and the end of economic science [emphasis in the original]’. He (Bastiat, 1848/1964: 43) furthermore pointed out ‘[I]t is in fact to this faculty ... to *work the one for the other*; it is this transmission of efforts, this *exchange of services* [emphasis added], with all the infinite and involved combinations to which it gives rise ... which constitutes Economic Science, points out its origin, and determines its limits’.

More recently, Prahalad and Ramaswamy (2000) had been advocating value cocreation for several years prior to Vargo and Lusch (2004) and, before them, Ramirez (1999) had traced its recognition back at least 300 years. In fact, S-D logic was, from its initiation, more the identification, synthesis, and extension of an apparent coalescence in the ongoing development of marketing thought, as reflected in the title ‘Evolving Toward a New Dominant Logic for Marketing’ Vargo and Lusch, (2004), than a radically new idea. That is, it is grounded on a foundation built by many others, as has been its progress.

Whereas the foundational conceptualizations of S-D logic have not changed, they have been extended and deepened and its impact has grown significantly. This is due, in a very large part, to the contributions of a growing community of scholars, both within and beyond marketing and other business disciplines. Its legitimization has also increased, as evidenced by the progression of its status from often just a somewhat perfunctory mention to a substantive topic, to a keyword and, increasingly, to a central focus and component of article titles and full articles.

Over the last 15 years, there have been several important conceptual turns in S-D logic. Examples range from the shifting from an implied dyadic orientation to an explicit

actor-to-actor, network orientation (Part VII in this *Handbook*), and then to a more dynamic, systemic orientation (Part IV in this *Handbook*). In the process, institutions (e.g., social norms, rules, meanings, and other heuristic aids to value cocreation) have become understood as the primary building blocks (Part V in this *Handbook*). Other shifts, such as embracing the systems-related concept of emergence, are underway. Together, these turns carry with them various ontological, epistemological, and methodological issues. The purpose of this chapter is to explore these turns and issues, as well as to point toward future directions.

## MAJOR CONCEPTUAL TURNS

In the beginning, at least as identified in the initial article (Vargo and Lusch, 2004), the foundations of S-D logic were, as noted, rather simple. They represented a shift in understanding of economic activity in terms of value creation (originally called ‘coproduction’) taking place through reciprocal service exchange, as captured in eight foundational premises (FPs). Soon thereafter, these were expanded slightly by the addition of two FPs (FP9 and FP10), which specified that (1) the resources used in service exchange are created through the integration of resources obtained through service exchange with other actors (Vargo and Lusch, 2006, 2008) and (2) value has to be understood in terms of the holistic experiences of referent beneficiaries (Vargo and Lusch, 2008). Especially with the addition of these two FPs, a network structure was implied (see also Chandler and Vargo, 2011). Most recently (Vargo and Lusch, 2016), an 11th FP was added, which identified institutions as the mechanisms that facilitate the coordination in value cocreation.

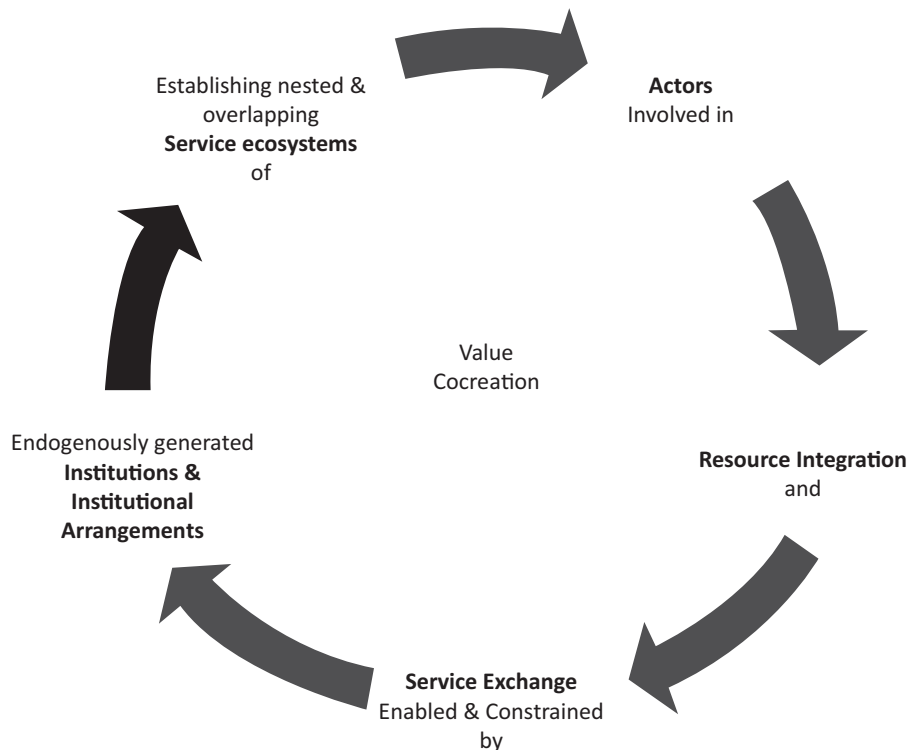
At first glance, it might appear that S-D logic had become more complicated along the way. However, I argue that it has actually become increasingly simplified. This has

occurred (1) through a reduction of the 11 FPs to five axioms, from which the other FPs could be derived (see Chapter 1) through several conceptual turns that have elevated S-D logic from what might initially have been seen as a theoretical framework specifically applicable to marketing and marketing managers to a more general framework, applicable to a wider range of phenomena. The result is a metatheoretical framework with relatively few moving parts connected by a simple narrative of value cocreation through resource-integrating actors involved in reciprocal service exchange coordinated by institutions and institutional arrangements in service ecosystems as illustrated in Figure 41.1. It is a narrative that is context neutral, one which has been applied in areas as diverse as management information systems, human resource management, civil engineering, art, hospitality, and library

science, to name a few. The major conceptual turns are discussed below.

### **The Actor-to-Actor Turn**

Traditionally, economic activity has been seen in terms of dyadic transactions between producers (e.g., firms) and consumers (i.e., destroyers) of value. As Vargo and Lusch (2011) argued, this fallacy of the conceptualization of the linear, sequential creation, flow, and destruction of value is, arguably, the single most detrimental aspect of traditional views of markets and marketing. One solution is to understand that all actors (e.g., individuals, firms, customers, families, organizations, etc.) are fundamentally doing the same thing – integrating resources they obtain from market-facing, private and public sources through service provision to enhance



**Figure 41.1** The narrative and process of S-D logic

Source: Vargo and Lusch (2016).

their own wellbeing. This generic–actor orientation is consistent with much of the business-to-business (B2B) literature, most notably as it is associated with the Industrial Marketing and Purchasing (IMP) group (e.g., Håkansson and Snehota, 1995). It is also consistent with Bagozzi (1974), who, in writing about marketing as an organized behavioral system of exchange, defined the exchange system as a ‘set of social actors, their relationships to each other, and the endogenous and exogenous variables affecting the behavior of the social actors in those relationships’ (1974: 78), which has distinct similarities to the service ecosystems perspective of S-D logic.

This normalization of actors and their practices essentially obviates the need for separate B2B, B2C, C2C, and similarly siloed literatures. This does not suggest that the phenomena studied in these sub-disciplines should not be studied; it just suggests that they can all be studied from a common, transcending orientation.

The A2A designation is also not intended to imply that all actors are alike. In fact, it is intended to do just the opposite. By not pre-defining roles and therefore seeing actors in terms of systemic contexts, I argue that the salience of actors’ idiosyncratic nature is enhanced, rather than diminished. What it does do, as suggested by Vargo and Lusch (2011), is to allow seemingly diverse areas of inquiry, such as consumer marketing, B2B marketing, and consumer culture theory (CCT), to inform each other. That is, it can enable research that cuts across previously separate silos and seemingly different research streams.

### ***The Systems Turn***

The move to an A2A orientation, coupled with the existing resource-integration and service-for-service exchange orientations, also portended an additional shift, from a network to a system orientation. S-D logic had already moved from what might have been seen as a dyadic orientation in Vargo and Lusch (2004) to a network orientation, as implied by a

model of actors getting the resources they use in service provision (FP1) from several sources (FP9) (Vargo and Lusch, 2008). However, it began migrating to a full system orientation soon thereafter (see, e.g., Chandler and Vargo, 2011; Vargo and Lusch, 2011), but this was punctuated in Vargo and Lusch (2011) to emphasize the dynamic, interactional nature of the whole value-creating process.

This systems orientation was captured in the concept of a service ecosystem, defined as ‘a relatively self-contained, self-adjusting system of resource integrating actors connected by shared institutional arrangements and mutual value creation through service exchange’ (Vargo and Lusch, 2016). As suggested by this definition, the service ecosystem’s turn spawned an additional turn, one that recognized the role of the coordinating mechanisms that facilitate value cocreation through service ecosystems – institutions and institutional arrangements, as discussed below.

These service ecosystems are seen as nested and overlapping. Thus, while adopting an ontological understanding of a ‘flat’, one-level world, S-D logic also maintains an epistemological, multi-level (of aggregation) perspective for analytical purposes (Vargo and Lusch, 2017). This multi-level view also facilitates the study of emergence, which will be discussed in a subsequent section.

### ***The Institutional Turn***

As discussed throughout this book, institutions are the norms, rules, meanings, and other heuristics used for coordination of activities, what North (1990) calls ‘the rules of the game’. Institutional arrangements are interrelated assemblages of institutions (Vargo and Lusch, 2016). Institutional theory is prevalent in most of the social sciences. In fact, a sizable number of Nobel Laureates in the economic sciences have been institutional theorists. One of them, Elinor Ostrom, arguably and of course unknowingly, made the case for a significant, future role of

institutions in S-D logic when she asked and answered affirmatively:

Can we dig below the immense diversity of regularized social interactions in markets, hierarchies, families, sports, legislatures, elections, and other situations to identify universal building blocks used in crafting all such structured situations ... to build useful theories of human behavior in the diverse range of situations in which humans interact? Can we use the same components to build an explanation for behavior in a commodity market as we would use to explain behavior in a university, a religious order, a transportation system, or an urban economy? (Ostrom, 2005: 3–4)

As noted, her answer was ‘yes’ and her building blocks were institutions. It is important to emphasize the significance of this assertion. It implies that institutions might be considered in terms of the social counterpart to, if not scaled equivalent forms of, atoms and DNA.

But from where do these institutions come? The simple answer is they develop as coordinating mechanisms among actors with shared goals – necessary shortcuts, given the cognitive limitations of individual actors (Simon, 1969). A more detailed answer is that they come from the recombination of parts of existing institutions. In the context of technology, Arthur (2009) calls this ‘combinatorial evolution’ – the recombination of parts of existing technologies. Vargo et al. (2015) extend this concept of combinatorial evolution to market innovation, seeing both technological and market innovation in terms of the coevolution of institutional structures.

Vargo and Lusch (2017) extend it even further to processes of institutionalization in general. In practical terms, this process is often conceptualized as something like ‘institutional work’, the maintenance, disruption, and creation of institutions by actors (Lawrence et al., 2009). It is also increasingly recognized as a design function in the ‘design thinking’ and ‘designing for service’ literature (Kimbell, 2009; Wetter-Edman, 2014).

In S-D logic, these institutions act as the glue that holds service ecosystems together by facilitating resource integration and service exchange. Given the nested and overlapping

nature of ecosystems, and thus institutional arrangements, coupled with this ongoing resource integration and service exchange, value cocreation is a highly dynamic process, consistent with the systems orientation.

At first glance, it might appear that this implies a very *complicated* picture, but it is one usually better understood as just *complex* (Rogers, 2011). That is, rather than having many moving parts that, while difficult to grasp, are at least comprehensible in theory, with outcomes that are predictable – that is, complicated – service ecosystems often have, or at least emerge from, relatively few moving parts that interactively organize themselves into compound structures through feedback mechanisms that are understandable, though often not predictable – that is, they are complex. For example, the mechanisms of a watch are complicated, but its outcomes are predictable, whereas the organization of an ant colony is complex and its precise structure is unpredictable, idiosyncratically arising from interactions based on a few simple rules, with feedback. It is however understandable and explainable in terms of the *performativity* – acting out – of these relatively few, simple rules. Markets and other human (actually, all living) systems are characteristically complex systems.

### ***The Qualified, Multi-Levels Turn***

Commensurate with the development of a network, systems, and institutional orientation, S-D logic began the epistemological employment of various levels of analysis, usually conceptualized as micro, meso, and macro levels (see e.g., Chandler and Vargo, 2011; Lusch and Vargo, 2014). Initially, these levels, while relative to each other, rather than fixed, were treated as separate, though connected through the concept of structuration (e.g., Giddens, 1984). However, over time, they became partially reified by some and at least implicitly treated ontologically. It became increasingly apparent that this was problematic. Levels cannot exist independently of their constituent



parts. That is, societies, organizations, and cities cannot exist independently from the individual actors that comprise them. Thus, increasingly, Vargo and Lusch (2016) began to caution against reification.

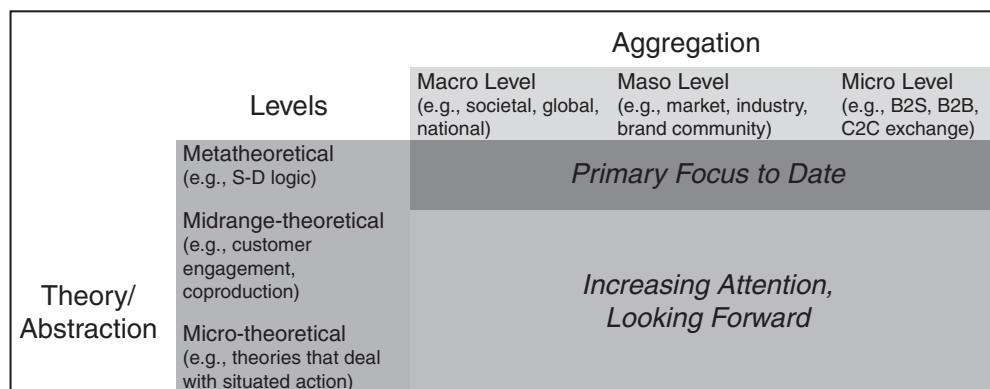
Vargo and Lusch (2017) were more explicit about endorsing a ‘flat-world’ view (Latour, 2005; Scott, 2008). However, they noted that, whereas Latour and other flat-world advocates are ontologically correct, strict adherence to this orientation could be epistemologically restrictive. That is, analytical levels are very useful for understanding a central phenomenon related to all self-organizing systems: *emergence*, as will be discussed subsequently. Similarly, they provide a perspective on *context*. Seeing emergence and context can be facilitated through *oscillating foci* (Chandler and Vargo, 2011) between the levels of perspective (aggregation).

Levels had also become something of an issue in that a few scholars (e.g., Achrol and Kotler, 2006) saw S-D logic as micro-level oriented, whereas a few others (e.g., Grönroos and Voima, 2013) considered it to be strictly macro-level oriented. In part, to clarify these contradictory issues, Vargo and Lusch (2017) distinguished between *levels of aggregation* (macro, meso, micro) and *levels of abstraction* (metatheoretical, midrange-theoretical, and micro-theoretical) and situated S-D logic as metatheoretical but, consistent with

a flat-world orientation, applicable to all levels of aggregation (see Figure 41.2). This is an especially important, but perhaps somewhat subtle, point: S-D logic does apply to the macro level of aggregation, as some have suggested, but not solely to it. Likewise, it applies to the micro level but not solely. To suggest otherwise would be completely inconsistent with the ‘flat-world’ orientation discussed above. It would also be inconsistent with the suggestion that, given the flat-world orientation, one must oscillate one’s focus between levels of aggregation to fully understand phenomena at the level of primary focus.

## OTHER ONGOING (RE)ORIENTATIONS

Together, the above turns have indicated the need for a number of additional, related, necessary, and ongoing orientations and reorientations. Most of these are related directly to the systems turn. That is, given that the service ecosystems orientation is firmly at the heart of S-D logic, one must attend to issues and theories of complexity and emergence and to consider orienting themselves toward triads, rather than dyads, as the basic unit of analysis of exchange-related phenomena.



**Figure 41.2 Levels of abstraction and aggregation**

Source: Adapted from Vargo and Lusch 2017.

## Complexity Theory

As noted, service ecosystems are complex or, more appropriately, complex-adaptive systems, the subject of *complexity theory* (e.g., Holland, 2014). As Arthur (2015: 182) indicates, ‘Common to all studies of complexity are systems with multiple elements adapting ... to the world – the aggregate pattern – they create’. These patterns are not, however, random; neither are they indeterminate. They are just not characteristically predictable. That is, they are characterized by aggregate, often repeating (i.e., fractal) patterns (Arthur, 2015; West, 2017) that form from individual actions, recursively responding to the patterns that they produce (c.f. Giddens, 1984). Complexity theory studies these repeating patterns and processes that create a dynamic order behind what often appears to be complicated activities and processes.

*Complexity economics* is the study of these phenomena in the economy. It differs considerably from neoclassical economic thought in that it assumes out-of-equilibrium states and systems evolution. As Arthur (2015: 182, 136–7) indicates: ‘The economy forms an ecology for its technologies, it forms out of them, and this means it does not exist separately’. He continues, ‘Notice the circular causality at work here. Technology creates the structure of the economy, and the economy mediates the creation of novel technology (and therefore its own creation)’. Technology here is the application of useful knowledge (Arthur, 2009; Mokyr, 2002) and that useful knowledge is captured in S-D logic as ‘operant resources’, which, when applied for benefit, is defined as ‘service’ (see Akaka and Vargo, 2013).

Complexity theory and complexity economics are still young and their application to service ecosystems has only recently begun. However, significant progress has been made over the last 20–30 years, particularly in conjunction with the Santa Fe Institute. Its integration and advancement are critical to S-D logic, since, as noted, service ecosystems are complex adaptive systems and,

almost by definition, value cocreation is a complex adaptive process.

The work of informing S-D logic through complexity theory has already begun. Vargo and Lusch have linked the two for the last several years (e.g., Lusch and Vargo, 2014; Vargo and Lusch, 2017) and it had been explored even more deeply by a number of S-D logic associated scholars, such as Ng et al. (2012). Clearly, much more work in this area is needed.

## Emergence

One of the most significant phenomena emanating from a systems perspective and, especially, complexity theory, is emergence. Emergent phenomena are structural characteristics that can be observed at one level in a system that are not present in its constituents. The classic example is wetness of water, which is not present in either hydrogen or oxygen molecules that it comprises. In business, emergence can be seen in innovations, markets, and ‘industries’, consistent with Lusch and Vargo’s (2014) claim that ‘markets don’t exist’, a priori as well as other assertions that markets are created (see e.g., Alvarez and Barney, 2007; Read et al., 2009) and performed.

Emergence is sometimes classified as existing in two forms: weak and strong (see Clayton, 2009 for a more detailed discussion). *Weak emergence* (also referred to as epistemological emergence), as in the case of water, while characterized by a non-constituent structure, is predictable. That is, it can be predicted, given the combination of oxygen and hydrogen under certain conditions. *Strong emergence* (also referred to as ontological emergence), on the other hand, cannot be predicted because it comes about from dynamic, systemic, contextual conditions that can never be completely specified. Again, markets are examples.

Emergence is actively studied in most systems-oriented disciplines, such as biology and sociology, but less so in business

disciplines. In fact, even though one of the regular examples of emergence is a market, there are relatively few instances of the study of emergence in marketing. There are exceptions, however. For example, Peters (2016) explored emergence in terms of types of resource integrations (homeopathic and heteropathic) and Taillard et al. (2016) discussed emergence in terms of shared intentions in service ecosystems (see also Koskela-Huotari et al., Chapter 22 and Peters, Chapter 23 in this *Handbook*). Less directly, Rand and Rust (2011) and Held et al. (2014) explored methodological alternatives.

Much of the current work on emergence is based on complexity theory, as discussed. It also has significant methodological and theoretical implications, as will be discussed.

### **Materiality**

There seems to have been quite a bit of misunderstanding about the position on tangibility and materiality in S-D logic. No doubt, some of it directly attributable to the early writing of Vargo and Lusch (e.g., 2004, 2008). In distinguishing between ‘operand resources’ – resources that require action on them to create benefit – and ‘operant resources’ – resources that can act on other resources to create benefit – examples often used were of natural resources for the former and applied knowledge and skills for the latter. Furthermore, the distinction between G-D logic and S-D logic could be (has been) interpreted as privileging intangibility, at least in its essential role in value cocreation. This was never intended but perhaps neither was the issue adequately explored and explained.

The intention, in both instances, was to emphasize the point that, whereas traditionally value had been treated as a property of tangible objects, it was at least partially a function of activity, such as interaction and other influential processes, as implied by a systems orientation (Capra and Luisi, 2014). Clearly, given that resourceness was seen as a contextual

issue – that is, ‘resources are not; they become’ (Vargo and Lusch, 2004) – rather than an innate property of objects, coupled with the understanding of goods as ‘frozen ideas’, it would have been almost incoherent to claim that material objects could not be considered operant resources. The same could be said about the fact that human agency, the focus of the initial academic concern, cannot really be considered extra-material. However, for better or worse, the issues of the possibility and role of material agency were not adequately considered, at least initially.

The need to further clarify that situation began to change, at least for me, as I was asked about whether or not material objects could be considered operant resources. My initial response was: of course they could, at least if seen as part of a system. The beginning of a more formal consideration and recognition of the role of materiality was Akaka and Vargo (2013), which acknowledged that technology, including, but not limited to, its material manifestation, should be considered operant resources. Even more formally and directly, in Vargo and Lusch (2017), Bob Lusch and I clearly adopted a position that ‘things have agency’. This was immediately motivated by the recognition that, in a connected world, a position that agency could be singly privileged to humans was untenable. However, it also reflects a more general stance, in line with a host of other scholars, such as Latour (2005), Scott (2008), Orlikowski and Scott (2008) and Capra and Luisi (2014) (see also Part VII in this *Handbook* for additional discussion).

No doubt, this stance will require some additional consideration of the operant–operand distinction, and perhaps some further explication of how agency is conceptualized in S-D logic, particularly as it is related to ‘conscious activity’, as is often at last implied in various literatures, a contention that is likely overestimated. More generally, the role of agency is probably overstated as it relates to human action, as is its absence in material impact.



Closely aligned with this issue of the agency of things is the issue of the distinction between the social and ‘natural’ world. It is an issue that also shares some similarity to that of a flat world, as previously discussed. As with that position, I think the only coherent stance is that there is only one world. This does not mean that there are not human phenomena that are qualitatively unique; it just means that the social and the non-social all rest on the same physical foundation, share a common world (or universe), and that human beings are not alone in their uniqueness (Bejan, 2016; Searle, 2010).

This one-world stance does not suggest that, for epistemological purposes, this world cannot be studied from the perspective of different disciplines. However, one should not lose sight of the fact that disciplines are just that, perspectives that are centered on particular phenomena, which, in the last analysis, are all part of a common, interdependent system.

### ***From Dyads to Triads***

Almost all marketing analysis, if not business and economics in general, assumes a dyad as the basic unit of analysis, typically a ‘producer’ and a ‘consumer’. However, S-D logic’s systemic orientation suggests this is inadequate because it does not capture the full, dynamic nature of value cocreation. Rather, as suggested in Siltaloppi and Vargo (2017), a more appropriate level of analysis is the triad. Simmel (1950) is usually credited with the first use of the term triad in his study of the ‘associations of threes’ as a foundationally important unit of sociological analysis. He distinguished the dyad from larger groups by the fact that it does not attain a sense of collectivity or ‘super-personal life’ outside the two members constituting it.

The introduction of a third party changes the social dynamic, since each actor not only interacts directly and reciprocally with

another actor but also operates as an intermediary between or is influenced by a third. Thus, the third can intensify a relationship between two actors – for example by serving in a complementary capacity – but it can also interfere with the immediate reciprocity of a dyadic relationship.

Because triads make salient the indirect ties bearing on actors, the triad can be seen as the smallest unit of analysis in network/systems research. It enables a consideration of actors as both shaping and being continually shaped by the system of ties bearing upon them (e.g., Granovetter, 1985), which a dyad cannot do. In marketing, Bagozzi (1974) makes a similar observation regarding the fundamental nature of market exchange, as he conceptualizes the restricted form of exchange between two actors as a special case of the more general forms of exchange – generalized and complex – which must be conceptualized in triadic terms (see also Sheth and Uslay, 2007).

These observations highlight that triads are not defined simply as systems of three actors. Instead, existing research converges on a view that triads are defined, at a minimum, by the *coexistence of two ties between three associated actors* (Vedel, 2016). Here, the two ties can be seen as the ‘direct’ exchange between two parties and the ‘indirect’ exchange between two others, both influencing the dynamics of the three-actor system as a whole (Chandler and Vargo, 2011). More generally, the triad, as a unit of analysis, can be seen as comprising at *least three actors* (Siltaloppi and Vargo, 2017)

There is a substantial triadic literature in sociology and operations research (see Siltaloppi and Vargo, 2017). Much of this centers on a ‘third’ as an intermediary or broker between two other actors. While applicable, Siltaloppi and Vargo (2017) argue that triadic analysis reveals much more, classifying triads in terms of not only brokerage, but also mediation and coalition. Arguably, these coalitions – implying being tied together by some shared purpose and processes – might

be seen as representative of the general case of institutionally defined, service ecosystems.

## APPLICATION FRONTIERS

Shortly after ‘Evolving...’ (Vargo and Lusch, 2004) was published, Bob Lusch and I began to get inquiries from academics about the directions S-D logic motivated research should and would take, both positive and, especially, normative. Other than to suggest a vision of it serving as a foundation for a general theory of marketing (Lusch and Vargo, 2006) or, more encompassing, of the market (Vargo, 2007), as noted, in most situations, we avoided sharing extensive detailed thoughts. We did this because we thought the directions (1) were unknowable at that time and (2) would be cocreated by a community of interested scholars of S-D logic (both supportive and critical), rather than by us. However, Vargo and Lusch (2017) argued that it is now possible to look forward with somewhat more clarity. The areas identified for fruitful application of the S-D logic narrative are midrange theory, macromarketing, ethics, environmental sustainability, social sustainability, and public policy. Each one of these areas are discussed further below.

### *Midrange Theory*

As noted, the primary focal level of abstraction of S-D logic, at least as represented by Vargo and Lusch (2004, 2008, 2016), was metatheoretical. This was because it was felt that meaningful midrange theory, and especially normative theory, needed to be grounded in a coherent and cohesive theoretical framework. This was not intended to diminish the importance of midrange theory in any way. On the contrary, midrange theory and the normative theory based on it are critical; ultimately, they are the purpose.

Neither did this metatheoretical emphasis ignore midrange theory development. Examples involving either Vargo or Lusch, or both, can be found in McColl-Kennedy et al. (2012), Akaka et al. (2013), Lusch et al. (2007), and Bettencourt et al. (2014), to name just a few. More generally, there has been ongoing work at the midrange-theoretical level since the beginning of S-D logic through the growing S-D logic community. Examples are Abela and Murphy (2008), Brodie et al. (2011), and Storbacka and Nenonen (2011). A more comprehensive listing of S-D logic based midrange theory development, both in the business and non-business literature, can be found in Vargo and Lusch (2017).

It also should not be ignored that S-D logic, even at a metatheoretical level of abstraction, has normative implications. Consider the implications of just the axioms, such as ‘service is the basis of exchange’ (A1), which changes the whole perspective from exchange being about the things exchanged to the process and outcome of exchange. Coupled with practitioners’ own insights, this has implications for the development of a full range of novel, innovative approaches to the opportunities (and challenges) in market creation and participation. This shift from a purpose of selling goods to reciprocal service provision also has ethical implications, as pointed out by Abela and Murphy (2008). The other axioms have similar implications, especially for innovation. As Vargo and Lusch (2017) noted, given advancements in the developments of S-D logic, including a more cohesive narrative, as discussed, it is now time for an even more concerted effort in midrange theory development, which will enable it to become more prescriptive and conducive to empirical evaluation, further contributing to its development.

A further note on midrange theory might be instructive here. As indicated, the emphasis is on the level of abstraction, rather than the level of aggregation. This distinction is consistent with Merton’s (2012: 448)

conceptualization of midrange (or ‘middle-range’) theory:

theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behavior, social organization, and social change.

Thus, it bridges metatheoretical and micro-theoretical levels. This later theoretical level should not however be confused with ‘micro-foundations’, which have been discussed in recent literature. Whereas there is incomplete agreement about their meaning, Barney and Felin (2013: 145) insist that ‘aggregation is the sine qua non of microfoundations’, as most other treatments of the concept seem to support. This would of course place it on a different continuum (i.e., aggregation – micro level) in our levels model and different from micro-theory (levels of abstraction).

There is no attempt here to privilege levels of aggregation or levels of abstraction. Rather, the primary intention is to emphasize that levels can be discussed in relation to both aggregation and abstraction and it is important to be clear which is in focus. To date, much, but not all, of S-D logic has been focused at a metatheoretical level of abstraction but is applicable to all levels of aggregation. Midrange theory, like metatheory, is a distinction related to the level of abstraction and more emphasis on midrange theory development is indicated at this stage of development of S-D logic. All levels of aggregation should be addressed, as has always been the situation. In all likelihood, this will of course promote hybrid approaches, since more mid-range- and micro-theoretical concepts are often suitable for addressing phenomena at particular levels of aggregation. Thus, while we focus here on midrange and micro-level theoretical development, we expect that much of it will be done through hybrid analysis.

None of this should be construed as suggesting that metatheoretical development of S-D logic is complete. As with all metatheoretical

frameworks, it is not likely ever to be. Rather, the future S-D logic can be expected to be based on an iterative process involving additional metatheory, increasing midrange theory, and evidence-based research (Vargo and Lusch, 2017), continually informed by a wider array of research streams at various levels of abstraction and aggregation (also see Part IV of this *Handbook*).

### **Macromarketing**

Especially over the last several decades, the emphasis in marketing management and consumer behavior has become micro focused (Lusch, 2007; Wilkie and Moore, 2003). Both research and education related to market systems and other phenomena at higher, macro levels of aggregation have been minimal. This is especially true in the United States. With growing interest in issues of sustainability, ethics, corporate social responsibility, etc., this relative neglect seems particularly anomalous. Arguably, part of the dearth of attention to macro-level issues is attributable to the lack of theoretical frameworks capable of addressing and informing them. However, the service-ecosystems, institutional framework of S-D logic seems especially well suited for the task, since its metatheoretical orientation is equally applicable to all levels of aggregation, thus capable of not only investigating macro-level phenomena but also linking it to both firm and individual phenomena. See also Lusch (2017) for a further discussion of macromarketing issues.

### **Ethics**

As Abela and Murphy (2008; see also Murphy and Laczniak, Chapter 9, this *Handbook*) have suggested, the service and cocreative orientation of S-D logic can inform a normative framework for marketing and business in general (see also Vargo and Lusch, 2008). For example, S-D logic and its foundational

premises have been shown to be consistent with an integrative justice model. This, in turn, provides multinational corporations (MNCs) focusing on fast-growing and developing markets with guidelines for operational practices that help fairly allocate the benefits and burdens among many actors and stakeholders (Laczniak and Santos, 2010).

Others have suggested that the concept of *service*, as defined in S-D logic, has implicit ethical connotations and can bridge to higher-level ethical principles, which have implications for better business practice (Guitian, 2015). Arguably, there are a host of contemporary business issues, such as information privacy, artificial intelligence, cognitive assistants, and rights of various stakeholders, for which S-D logic inspired midrange theories might provide foundational insight. This seems especially to be the case given the S-D logic perspective that institutions and institutional arrangements facilitate value cocreation (often on a massive scale) among actors in a service ecosystem, including society. For instance, some business practices might alternatively be considered ethical or unethical, depending upon the ecosystemic, institutional framework within which they are nested. This would be a meaningful and valuable area of study, as more nations move to more market-based economies but are still coordinated by institutions put in place for a different type of economy. Thus, changes in ethical practices might require institutional work (Lawrence et al., 2009). One focused form of institutional work that is particularly pertinent to ethics is legitimization (see Humphreys, 2010; Scott, 2008).

### ***Environmental Sustainability***

In ‘Evolving...’, Vargo and Lusch (2004) briefly discussed the work of Malthus (1798) and his predictions about how population growth would soon outstrip resources, an argument that has resurfaced in recent years. Today that debate on the potential vulnerability of natural resources has resurfaced.

Especially over the last 200 years, the world has witnessed the impact, both potentially good and potentially bad (West, 2017), of a much larger global population and many more nations moving toward economic development. Some of this growth has been facilitated and mitigated by technology (i.e., applied operant resources), which has expanded the usable supply of resources such as petroleum, as well, at least by a number of measures, the overall quality of life (West, 2017). However, appropriately, we are seeing more desire by nations and businesses to be proactive in creating environmentally sustainable business practices. S-D logic, with its focus on service ecosystem viability and resiliency, can be used as an informative, robust framework for environmental sustainability (see also Löbler, Chapter 21, this *Handbook*). More collaborative, transdisciplinary research is indicated.

### ***Social Sustainability***

Over the last decade there has also been increased discussion about issues of social sustainability, the extent to which society is capable of sustained wellbeing over time (West, 2017). It is thus linked to environmental sustainability. S-D logic, with its dynamic, service ecosystems and level-of-aggregation (e.g., micro, meso, and macro) lens, potentially provides suitable scaffolding for a theory of and an emergent, evolving future. It also embraces a multiple-stakeholder orientation (Frow and Payne, 2011; Lusch and Webster, 2011), which might enable a better recognition of both negative and positive externalities that influence social sustainability. Finally, S-D logic, with its focus on the role of institutions and institutional arrangements in coordinating diverse human actors, might provide additional understanding for addressing many of these issues through institutional change. See Pels and Mele (Chapter 34, this *Handbook*) for further discussion of S-D logic in relation to emerging markets.

### **Public Policy**

Public policy plays both a facilitating and constraining role in the service ecosystems of which it is a part. Generally, public policy represents the formal codification of institutional arrangements and, as with all institutional arrangements, they can assist coordination among actors by specifying applicable rules. However, they also can hinder innovation, by introducing rigidity, which can restrict innovation.

There are a lot of public policy issues, both current and emerging in society, for which traditional legal standards, based on G-D logic definitions of markets, are ill equipped, since they are focused on products and views of firms in terms of dyadic transactions, rather than more extended, value-cocreation, service ecosystems. These issues yield a variety of questions, such as where does legal liability fall for a market offering; whom is at fault when value propositions are cocreated among firms, suppliers and customers, and others; where does fault lie if an actor makes poor decisions using cognitive assistants/mediators; and what role does (should) governments play in fostering institutions and institutional arrangements in global service ecosystems that stretch across many geopolitical areas?

Similarly, many nations have anticompetitive/antitrust policies that restrict cooperation, even if beneficial to the public. For example, US antitrust law intended to protect the public against malevolent collusion can also restrict collusion for the common good, such as resource conservation (Adler, 2002). S-D logic, on the other hand, focuses on flows of service and also resource-integrating, value-cocreating practices. This implies that firms typically collaborate with other firms – what is sometimes known as ‘coopetition’ (e.g., Nalebuff and Brandenburger, 1996) – as much or more than they compete, in order to offer more compelling service solutions – that is, value propositions. Consistent with S-D logic, scholars and public policy makers

are increasingly understanding markets from a network and ecosystems perspective (Moore, 2006), implying the need for change in public policy. Research in this direction can also benefit from an S-D logic inspired theory of the market and value cocreation (see earlier section on this topic) and, conceivably, of the economy.

Some work in this area has already begun, in the form of ‘public service-dominant Logic (PSDL)’ (e.g., Osborne et al., 2013). However, at least some of it leaves out or alters key parts of S-D logic and it has not always adequately grasped or been extended to a full service-ecosystems orientation. However, these shortcomings have recently been overcome by Trischler and Charles (2018), who have demonstrated that the S-D Logic framework is particularly well suited for informing public policy through its A2A, institutional, and ecosystems framework

From a systems perspective, the issue of institutional rigidity is a particularly pertinent one for public policy. The essential role of institutions, including laws and regulations, is integral to S-D logic. But institutional arrangements can be as restrictive as they are facilitating. Rigidity often occurs as unintended consequences of malevolent policy. For example, consider the difficulties confronting, if not outright banning of, innovative exchange platforms, such as Airbnb and Uber, because of laws intended to protect the public (or in many cases, special-interest subsets of it). Similarly, consider the often-prohibitive laws impacting alternative-energy transportation companies, such as Tesla, even as public officials call for more innovation in that area.

Furthermore, West (2017) found that organizations (e.g., firms) tended to underperform and have high mortality rates based on relatively rigid cultures, whereas cities, which are less subject to top-down control, tended to grow more organically, and thus tended to be more innovative and robust, with the wellbeing of their constituents positively



scaling with size. While seemingly positive for public policy, these findings more generally point out the pitfalls of overly rigid institutions. DiMaggio and Powell (1983) referred to this organizational rigidity in terms of the ‘iron cage’ of institutionalization. Clearly, one priority in the academic consideration of public policy needs to be understanding the sources and impact of institutional rigidity as they relate to adaptability of dynamic service ecosystems over time.

## **ONTOLOGICAL, EPISTEMOLOGICAL, AND METHODOLOGICAL IMPLICATIONS**

### ***Ontological and Epistemological Issues***

Generally, S-D logic can be seen as taking the ontological stance in line with scientific realism (Hunt, 2002). That is, it is in alignment with the understanding that there is a reality, one that, while it can never be fully known, can be reasonably isomorphically modeled and the models evaluated for robustness. However, this should not be interpreted as a denial of the relativist claim – that is, truth is a matter of interpretation (Hunt, 2010) – which is often seen as contrary to scientific realism. I do not see the realist and relativist positions as a dualism. Rather, I think the scientific realism versus relativism issue can be understood in terms of a matter of perspective. That is, ontological reality, of which the social is a part, and its ‘natural laws’ can be approximated, particularly from a metatheoretical level of abstraction, applicable to all levels of aggregation (Vargo and Lusch, 2017), whereas specific phenomena, viewed from all levels of the aggregation, are contextually unique – that is, they are emergent, situationally, and comparatively ‘relative’. As indicted, however, this relativity does not mean that these phenomena are not governed by common,

approximately knowable laws. In short, phenomena can be understood and explained, albeit imperfectly, at least abstractly, even though they are contextually unique.

This stance is consistent with S-D logic’s long-standing position of advocating the need for grand theory (i.e., metatheory) and simultaneously claiming the contextual nature of value and value cocreation (Vargo and Lusch, 2008). Similarly, it is in this sense that S-D logic can recognize the distinction between what Searle (2010) calls ‘brute facts’ (i.e., ‘natural’) and ‘institutional facts’ (social) and is also consistent with Simon’s (1969) position on the ‘artificial’ world. That is, the fact that specific phenomena are (contextually) relative does not obviate the fact that there is an ontological reality, with functional consistencies (cf. Bejan, 2016). Stated differently, the relativist position can be understood in terms of a scientific realist position, in which the contextually complex nature of specific phenomena is acknowledged.

Having said this, the emergent nature – that is, the whole is more than the sum of its parts – of complex, systemic phenomena pose potential problems for at least some scientific-realist approaches to epistemological issues. For example, Rudner (1966: 10) characterizes theory in terms of its ability to explain and predict (see also Hunt, 2002). But, arguably, at least some forms of emergence are not predictable. This implies that, whereas predictability is desirable, explanation might be the more essential condition of theory.

Emergence also raises another critical issue: whether or not causality can fully be captured in the traditional reductionist perspective in which all causality can be explained in terms of ‘lower-level’ phenomena. The alternative position is ‘downward causality’, the influence of higher-order structure on its constituent parts – for example, social structure causing individual activity. This essential issue of the presence of downward causality has not been resolved in the emergence literature, despite considerable discussion (see

e.g., Clayton, 2009; Deacon, 2009) and will not be approached here, except to suggest that it might be addressed through the realization that levels are analytical, rather than ontological. That is, in a flat world, all causality is a single-level phenomenon.

### ***Methodological Issues***

The ecosystems perspective also raises methodological issues. These are closely related to emergence and the problem of the predictability criterion. Emergence has largely been studied through qualitative methods, such as historical, retrospective accounts and observation and these will, and should, continue to be employed (for a fuller discussion, see Kozlowski et al 2013). However, quantitative methods are increasingly being employed also. Kozlowski et al., categorize the quantitative methods into (1) indirect methods, such as multilevel analysis (Raudenbush and Bryk, 2002), focused on emergent structures, for which emergence is inferred and (2) direct methods, such as agent-based modeling (ABM), focused more on the direct study of the process of emergence. This ability of ABS to provide direct insights into the process of emergence potentially makes it of particular interest for S-D logic, as it attempts to understand the process of emergent structures like markets and ‘industries’. It is also increasingly becoming legitimized (Rand and Rust, 2011).

The basic idea of ABM is pretty straightforward: create a digital world and inhabit it with digital agents, interacting according to a few simple rules, and observe the structures that evolve over time. Much of the early development can be found in the work of the Santa Fe Institute, the center of the study of complexity theory, using their SWARM simulation platform (e.g., Heibeler, 1994), but various other dedicated (e.g., NetLogo) and more general platforms have also been used.

Rand and Rust (2011) have provided guidelines for rigor in ABM research and

Held et al. (2014) have provided an overview of the use of ABM in market-related studies. It has been used in in S-D logic relevant work such as investigation of the emergence of norms (Savarimuthu and Cranefield, 2011) and information flow as related to social change (Ferrari et al., 2009). Fujita et al. (2018) have conducted a very preliminary exploration of the S-D logic narrative with ABM. Further work is needed with ABM, and other direct and indirect methods that lend themselves to the investigation of the emergence of institutions and the related ecosystems from the core S-D logic activities of resource integration and service exchange.

More generally, and consistent with the idea that S-D logic, especially with its recent emphasis on emergence, might lend itself to a generalizable framework for understanding social exchange beyond business (Vargo and Lusch, 2017), Bonabeau (2002) mused that ‘the broader agenda of the ABM community is to advocate a new way of approaching social phenomena, not from a traditional modeling perspective but from the perspective of redefining the scientific process entirely’. In support, he noted a suggestion by Epstein and Axtell (1996) ‘concerning a potential need for a “change [in] the way we think about explanation in social sciences. What constitutes an explanation of an observed social phenomenon? Perhaps one day people will interpret the question, “Can you explain it?” as “Can you grow it?”’. Clearly, these epistemological and methodological issues related to the study of value cocreation and institutional emergence warrant further exploration.

### **TOWARD A GENERAL THEORY OF THE MARKET AND BEYOND**

Through the work of a growing number of involved scholars, S-D logic has clearly had a descriptive and explanatory impact

on sub-disciplines and research streams in marketing, other business disciplines, and beyond (Vargo and Lusch, 2017). Whereas these contributions are significant, it is also important not to overlook the additional, potential significance of S-D logic's service-ecosystems orientation, especially as it relates to the role of self-adaptive systems and institutional arrangements in resource integration and value cocreation through service exchange.

Increasingly, numerous scholars have suggested that they feel that the current S-D logic narrative is beginning to move the status of S-D logic from an orientation and perspective toward a theory. That is, it provides not only the core concepts for a theory but also establishes an initial nomological network related to value cocreation through resource integration and service exchange. Almost since the beginning of S-D logic, there has been discussion of it as a foundation for a general theory, initially for marketing (Lusch and Vargo, 2006), but then more foundationally of the market (Vargo, 2007). Current discussion, however, is migrating toward S-D logic as a more overarching metatheoretical framework for theorizing about both market and non-market forms of value cocreation.

Despite numerous calls (Alderson, 1965; Bartels, 1968; Hunt, 2002), the quest for a general theory of marketing has been elusive. Arguably, this is, at least in part, the wrong goal, given that there is no real theory of the market, at least in marketing (Vargo, 2007). As Arndt (1985) pointed out, marketing has evolved more from normative science than from basic science (see also Vargo, 2007). Likewise, Venkatesh et al. (2006: 252) have argued, 'The term market is everywhere and nowhere in [marketing]'. In other words, whereas the subject matter of marketing is (should be) the market, academic marketers have not so much studied it in a positive sense as they have explored normative marketing decision rules (Vargo, 2007). It might be argued that this lack of a positive theory of the market in marketing is due to the fact

that marketing is built on a theory of the market from economics. But, a Nobel Laureate North (1990) insists, economics also has not developed a theory of the market. Thus, while there has been no claim of theory status, positive or normative, much less a theory of the market, perhaps it is appropriate that, given its market foundations, S-D logic is being seen as developing in that direction.

Over 50 years ago, in a discussion of the role of marketing in value ('utility') creation, Alderson (1957: 69) challenged: 'What is needed is not an interpretation of the utility created by marketing, but a marketing interpretation of the whole process of creating utility'. In contributing to that specific goal, perhaps the S-D logic narrative can, even more generally and more importantly, contribute to what Alderson seemed to be implying: providing an understanding of value cocreation that extends beyond a general theory of the market to inform economics and other business, as well as other, non-business disciplines dealing with value cocreation (e.g., sociology, political science, etc.).

## CONCLUSION

S-D logic is still a very young theoretical framework. It was originally an attempt to synthesize a number of somewhat disparate, emerging shifts in the literature of marketing, business, and economics, some traversing extended periods of time. Yet, through the work of a growing number of interested scholars, both from academic business disciplines and beyond, it has morphed into what might be considered to be a reasonably cohesive narrative of economic activity that is applicable to a wide range of applications, both academically and practically.

In spite of the progress, or perhaps because of it, much work remains. Some of the most salient areas are pointed out in this chapter. Others are dealt with in other chapters of this book. Much of the success of S-D logic to

date is that, in line with its central mantra of 'cocreation', it has always been considered open source. It will continue to be so, and all interested parties are warmly welcomed.

### Note

- 1 As will be discussed, this is not equivalent, however, to a claim that material things do not have agency.

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