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# Contextualization and value-in-context: How context frames exchange

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## Abstract

The purpose of this paper is to explore the role of context in service provision and, more broadly, in market co-creation. We oscillate foci from *an individual actor* at the micro level to a *market* at the macro level to make the scaleable influence of context more salient. This reveals the meso level, which is nestled between the micro and macro levels. We discuss how these market levels influence one another. We conceptualize markets as simultaneous, continuous exchanges that are bounded by each of these levels of context.

## Keywords

service-dominant logic, value-in-context, value-in-use, value networks

Most contemporary marketing scholars (e.g. Bagozzi, 1975; Hunt 1991; Vargo and Lusch, 2004a) consider the study of marketing and, by implication, markets to be concerned with exchange. The purpose of exchange is to access resources that have value potential – that is, that provide benefit – to actors from within their own particular contexts. However, marketing scholars disagree about where and how value is created through exchange and, thus, about the role of exchange in the value-creation process itself.

One perspective views value creation as the joint integration of resources by the multiple actors associated with an exchange. Specifically, service-dominant logic (Vargo and Lusch, 2004, 2008) emphasizes value as co-created by multiple actors (Prahalad and Ramaswamy, 2004), rather than viewing value as created by a single actor. In this way, the simultaneous exchange processes that occur across actors during service provision – which Vargo and Lusch (2004) define as resources

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applied for the benefit of another actor – can be seen as service-for-service exchanges. This *process orientation* emphasizes how multiple actors exchange service, which contrasts with the *output orientation* of the ‘neoclassical economics research tradition’ (e.g. Hunt, 2000), which emphasizes how multiple actors exchange *output units*. The latter orientation has also been referred to as ‘manufacturing logic’ (e.g. Normann, 2001); ‘old enterprise logic’ (Zuboff and Maxmin, 2002); ‘marketing management’ (Webster Jr, 1992); or ‘goods-dominant (G-D) logic’ (Vargo and Lusch, 2004a; 2008).

The purpose of this paper is to further explore how actors ‘come together’ through exchange within a specific context and to explore the role that context plays in framing exchange. Arguably, making salient the influence of context is relatively isomorphic with those conceptualizations of markets that are, at least intuitively, interactive (e.g. Gronroos, 2006); networked, or contextual (e.g. Collon, 1998). Similarly, the proposed emphasis takes a network perspective of markets, one that is most extensively found in marketing within the work of the IMP group (e.g. Hakansson and Snehota, 1995). The proposed emphasis differs slightly, however, from the IMP group work because there the emphasis is more on relationship than value creation. Additional insights can also be found in the approach of the Nordic School of service marketing (e.g. Gronroos, 2006), especially in the ‘many-to-many marketing’ approach of Gummesson (2006), but there too the emphasis is on interactions and relationships, rather than value creation. However, all of this work, along with the proposed framework, converge in their shared external perspectives on processes *outside* of actors and in their implication that value is emergent at intersections of resource networks (Normann, 2001; Vargo and Lusch, 2004a, 2008; Gronroos, 2006).

The purpose of the proposed framework is to extend this literature by making salient and explicit how context, markets, and value co-creation are theoretically related. It seems that for the study of markets and value co-creation, one should be able to call on academic marketing’s knowledge of markets to better understand both the value-co-creation process and the embedded, contextual nature of value. Ironically, this not the case, or, at least it is only so to a limited extent. As Venkatesh et al. (2006) indicate, ‘the market is everywhere and nowhere in marketing.’ That is, marketing has no real theory of markets. It might be argued that the reason for this is that it inherited one from economics but, as Vargo (2007) has suggested, to the extent that there is a positive theory of the market in economics, it is based on a normative theory of national wealth creation rather than a more general theory of value creation and exchange. Perhaps even more telling is the indictment of Nobel Laureate in Economics Douglass C. North (1977): ‘It is a peculiar fact that the literature on economics . . . contains so little discussion of the central institution that underlies neoclassical economics – the market.’

We build on the aforementioned studies by conceptualizing how context frames markets such that exchange between two actors can be seen simultaneously as exchange within and among service ecosystems, for example, and vice versa. This is important because exchanges across different contexts together constitute markets. To this end, we propose a multi-level perspective of context that is based on social network theory, economic sociology, and the general management literature. We integrate this with the service-dominant logic perspective of value co-creation and markets.

We propose three levels of context – micro, meso, and macro – that coincide with fundamental processes of value co-creation. By conceptualizing a layer – the meta layer – that ‘covers’ each of these levels, it is more salient how these levels evolve simultaneously. We begin building this framework by exploring the role of *resources* as articulated in various market and network theories. Then we explain how the recently reframed role of *service*, as articulated in the service-dominant logic,

pushes the notion of context to the forefront of marketing thought and theory. Based on this, we discuss how context frames exchange by making salient the simultaneous, interactive processes at each level.

## **The service-dominant logic perspective**

Service-dominant (S-D) logic (Vargo and Lusch, 2004a, 2008) represents a broader perspective of markets compared with traditional perspectives of markets that focus on the exchange of goods (referred to as goods-dominant, or G-D, logic). The S-D logic emphasis on service – the application of resources for the benefit of other actors – looks beyond goods as the basis of economic and social exchange. That is, S-D logic emphasizes knowledge and skills (operand resources) as primary resources of economic and social exchange, as opposed to G-D logic, which emphasizes physical resources (operand resources). Based on this, exchange processes that integrate knowledge and skills are focal when viewing exchange as value co-creation. To explore this more fully, we begin with a review and conceptual extension of the notions of resource and service, each of which is detailed below.

## **Toward understanding resources in context**

Marketing scholars have traditionally focused on goods as resources and, complementary to that view, asserted marketing processes as supplemental to the core *production* processes of the firm (Prahalad and Ramaswamy, 2004). In this sense, marketing processes are traditionally seen as ‘adding value’ to goods that are already inherently valuable. Most other similar resource conceptualizations stem from the resource-based view of the firm in which resources are seen mostly as goods ‘owned by the firm’ or as ‘inputs to production processes’ (Penrose, 1959; Barney, 1991; Peteraf, 1993; Barney et al., 2001).

However, Hunt and Morgan (1995) begin to discuss resources as owned or accessible by multiple actors. They further describe how actors seek access to resources and, as a result, interact with one another to gain such access. Resources thus connect actors to one another (and vice versa) and are valuable because of this. Together, the connected actors influence the ‘expansion and contraction’ of a resource (Constantin and Lusch, 1994). Zimmerman (1951: 15) affirms that resources ‘are not, they become; they are not static but expand and contract in response to human actions.’ As a result, when disparate actors access resources that they do not own or unilaterally control, they become connected because of their joint access to a resource.

For example brand knowledge refers to the differential effect of consumer response to a firm’s marketing efforts with regard to an offering that is known or ‘branded’ (Keller, 1993). From Zimmerman’s perspective, brand knowledge is a resource that evolves in response to the behaviors of actors. Together, actors that maintain favorable, strong, and unique brand associations expand the potential of brand knowledge as a resource, while actors that do not form favorable brand associations contract the potential of brand knowledge as a resource. For most actors, brand knowledge is a resource that cannot be controlled because it is neither owned nor is it unilaterally controlled. As a resource, brand knowledge can provide, among other things, benefits such as product familiarity, uncertainty reduction, or higher price premiums (for firms).

Actors further enhance or detract from brand knowledge as a resource when they partner or build networks that center on a brand in communities (Muñiz Jr and Schau, 2002) or in alliances (Srivastava et al., 1998; Kotler and Pfoertsch, 2006; Pfoertsch et al., 2007). Accessible to these types of groups are other externally-based resources such as shared information or knowledge that

can also be jointly influenced by multiple actors (Rindfleisch and Moorman, 2001). For example actors can choose to build upon one another's knowledge in either a collaborative or competitive fashion (Johnson et al., 2004).

Each of these – brand or information – is an example of a resource that is externally-based and dynamically determined in the context; that is, they are resources that cannot be owned or controlled by a single actor. As such, they are resources that represent indirect exchange, or service-for-service exchanges that occur through service intermediaries. Often, these service intermediaries take form within institutions (e.g. monetary systems). In fact, various types of institutions can govern indirect exchange; for example, ownership systems draw on property rights to facilitate exchange.

Because actors are traditionally emphasized as 'owning' resources, actors have traditionally been viewed as separate and unique from the resources and contexts within which they are embedded. But often, because of their past service efforts and also because of their rights to future service (e.g., money), they become connected within these contexts to other resources and other actors. For this reason, many scholars emphasize the use of governance mechanisms for managing ownership, and thus control, of resources within their contexts (for example see Wathne and Heide, 2004). However, because of resources that cannot be uniquely owned or controlled, as discussed, we further develop the emphasis of Ford and colleagues (2003) on actors themselves as resources within a particular context. This refers to firms whose competences and connectedness to resources can act as resources to other actors (Bagozzi, 1975; Achrol and Kotler, 1999; Kogut, 2000; White, 2002; Araujo and Easton, 2005). This occurs when, for example, actors indirectly connect actors with other actors (Hakansson and Snehota, 1995; Gronroos, 2006; Gummesson, 2006).

An example of this might be a brand. For example if a college student is looking to do laundry and is unfamiliar with laundry detergents, a familiar brand may serve as a resource because it connects the student with a firm that is reputable for providing quality laundry detergent. Or, in another example, two fans of a popular band (e.g. the Beatles) may become acquainted on a website such as Facebook because they seek an association with the Beatles music brand. As a result of their individual efforts, these actors come to be in one another's contexts. Inadvertently, through their individual efforts, they reciprocate benefit to one another. Their access to one another is a fundamental aspect of how they resolve their situations because they draw upon one another as resources (Wilkinson and Young, 2005).

How actors draw upon one another as resources is critically dependent on the contexts in which they are embedded. For this reason, actors can be said to be partially defined by their contexts while their contexts can be said to be partially defined by them (the actors). In other words, actors and their contexts are mutually constitutive, or partially defined by one another (Giddens, 1979). Each actor brings a unique quality to the context that affects other actors in the context, as well as the context as a whole. Because each actor in the context is always integrating and exchanging resources with other actors and thereby serving other actors, there is continuous change in the context.

This continuous change highlights a market fluidity that has been understudied in the management and marketing literature. The dynamic and living fluidity of markets is framed, or formed, because of context. Contexts frame markets as interactions or exchanges that we can "see" and "understand". But essentially markets have no beginning or end; they are continuous. Contexts give markets form and function in time and space, whereas markets themselves transcend time and space because market exchanges simultaneously represent past and future service-for-service exchanges among different actors. Markets are, in fact, simultaneous exchange – whether exchange occurs between two people, among three companies, in New York, or on websites such

as ebay.com. Markets exist when two people exchange, and markets exist when twenty countries exchange. Markets exist in geographic spaces and virtual places. But the ability to place parameters on exchange occurs because of contexts.

This points to a fundamental need to differentiate among contexts. This is especially important because actors may be drawn upon as resources in particular contexts, but act as deterrents in other contexts. Simultaneously, a particular context may act as a resource for an individual actor but act as a deterrent for a different actor (Emirbayer and Mische, 1998). In this way, resources 'become' resources largely as a function of the contexts in which they are embedded; that is, the potential of resources to be drawn upon for service depends on the context in which they are embedded. And, as a result, resources can be more valuable in one context, but less valuable in other contexts. How context influences the value of a resource is one way through which contexts frame exchange and the co-creation of markets.

## **Toward service in context**

As described above, context influences value co-creation and markets through its influence on resources. Context also influences value co-creation through its influence on service. This is discussed below.

One of the seminal works that addresses resources and service together within a context is *Theory of the Growth of the Firm*, in which Penrose (1959) describes how resources yield services. According to the Penrosian perspective, this occurs through many steps, the first of which is firms competing for and acquiring resources. This process continues when resources are used to offer 'service streams' that ultimately fill and replace the context with service outputs. Service outputs are then chosen from the context. To illustrate this further, consider two firms that competitively seek coal to fuel their rail transportation systems. The amount of coal is limited, and the ability to own and thereby control coal is seen as a fundamental driver of the firm's service provision and, ultimately, the firm's performance. As a result of their varying ownership and control of coal, the two transportation firms may offer heterogeneous service outputs, each of which become woven together, along with other firms' service outputs, into a context that is characterized by competition.

This Penrosian emphasis on competition and its foundation on the competitive ownership of goods has been the basis for many subsequent management and marketing studies that address service and context together. To summarize, the Penrosian perspective articulates that successful firms are those that own and control the resources that yield more service outputs in the context and 'grow' to dominate the context. Accordingly, the focus of Penrose was to write a *Theory of the Growth of the Firm* that aimed to explain the growth of multinational corporations in the 1940s to 1950s, rather than to write a theory of service, context, and value creation.

Penrose did however advance the notion that resources are distinguishable from context because they are *bundles of potential service*. Recent emphasis on service in marketing has begun to examine this more deeply by focusing on service within particular contexts. Increasingly, service has been viewed as a process, situated beyond traditional firm boundaries that links actors together, that is 'controlled bilaterally' with other actors (Gadde et al., 2003: 359). Such studies explain that, within each context, each actor serves other actors when it draws upon its resources in its own context as a benefit (Kogut, 2000; White, 2002; Araujo and Easton, 2005). That is, when different actors connect with one another, they ultimately join their different networks together. The newly joined actors – through their service-for-service exchanges –

constitute a context, a phenomenon studied in new institutional economics (e.g. Menard, 1995); the IMP Group (e.g. Hakansson and Snehota, 1995); the embeddedness of markets (e.g. Granovetter, 1985; Collon, 1998); and the environment of exchange (Bagozzi 1975; Achrol et al., 1983).

Extending this further, actors come to occupy unique positions in their contexts and, from those positions, draw on resources for service-for-service exchanges, both direct and indirect. To explain, consider two children at the same school who trade baseball cards at recess time. When they return to their respective classrooms, they might trade the cards with the child seated to the left side of their desks and then in turn trade again with the child to the right side of their desks. Each of the children with whom they subsequently exchange may offer different 'trades' because of what the child can access within his or her own unique network of exchanges. As a result, the two children in the initial trade scenario may likely end up with unique exchange experiences, as well as a very different combination of resources (e.g. baseball cards, candy, or stickers). The children, or actors, differ in part because of the varied nature of their interactions, including direct exchanges with children that are 'close-by' and indirect exchanges with their friends' friends that are indirect or 'further away' (Granovetter, 1985).

In this way, each actor's context affects its ability to directly access and leverage resources, and also affects its ability to indirectly access and leverage resources beyond its immediate context (Uzzi, 1997). Stated differently, each actor's service provision depends on its context. Each instance of service, or each 'unique application of uniquely integrated resources,' is value creation in a particular context that is enabled by direct and indirect access to various types of resources (Lusch and Vargo, 2006: 284). Most important, as resources are drawn upon for service across varying contexts, each context provides conditions 'under which different resources will and will not be valuable' (Barney et al., 2001: 43). This is the focus of the following section.

## Rethinking context

Given the discussion above, it is necessary to deepen our understanding of context. We begin by acknowledging the heterogeneous and distinctive nature of context, and define a particular context as a set of *unique actors with unique reciprocal links among them* (Wasserman and Faust, 1994; Sheth and Uslay, 1997; Carrington et al., 2005). The ability to define context uniquely is important because context heterogeneity affects how resources can be drawn upon for service.

As proposed in this framework, the notion of context and its influence on markets and exchange draws heavily from the sociology of markets literature, as well as the social networks analysis literature. Whereas the sociology of markets literature generally explores the emergence, dynamics, and decline of markets, the social networks analysis literature generally advances the methodology and theory of social structures (Fligstein and Dauter, 2007). Sociologists and anthropologists consider the study of markets and exchange to be 'one of the most vibrant fields' in the past 25 years, and have made significant progress in exploring context as the 'origins, operations, and dynamics of markets as social structures' (Fligstein and Dauter, 2007: 106). The proposed conceptualization of context is thus based on work originating from sociology (Freeman, 1977; Granovetter, 1985; Friedkin, 1991; White, 2002); anthropology (Emirbayer and Mische, 1998; Nakano and White, 2008); and management (Uzzi, 1997; Uzzi and Lancaster, 2003).

Social network analysis, in particular, can assist in making salient the heterogeneous nature of context (Wasserman and Faust, 1994) when it is viewed as a set of unique actors and unique reciprocal links among them. Social networks analysis can help to precisely and formally specify

service-for-service exchanges as reciprocal links among actors by representing them as either sociograms, sociomatrices or algebraic equations (Wasserman and Faust, 1994). These representations are precisely and formally equivalent such that context can be explored empirically.

For empirical work, many network studies begin with qualitative approaches, including primary data collection by way of participant observation or long interview techniques. But there are also many network studies that are quantitative in nature, including agent-based modeling, predictive modeling techniques, and survey-based research designs, as well as secondary data model estimations and simulation techniques. Visualization is also a key aspect of social networks analysis because it enables researchers to 'see' context and the scaleable influence of context within market structures (Homan, 1950; Marsden, 1982).

By defining context as a unique set of actors and the unique reciprocal links among them, it is possible to see how hundreds of actors and links may constitute one specific context, while two actors and links may constitute another context. Understandably, resources and service in each of these contexts will likely vary. Furthermore, these actors, links, and contexts are complex because links between the two actors can affect other actors or links throughout the context and vice versa. This occurs because every actor is itself connected to many other actors (Freeman, 1977; Barney et al., 2001; Madhavaram and Hunt, 2008). As a result, direct service-for-service exchanges between two actors may manifest in and influence indirect exchanges throughout and beyond a particular context (McFarland et al., 2008).


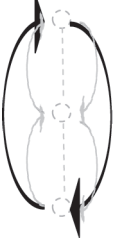
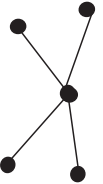
To explore how this occurs, we propose a multi-level conceptualization of context based on three levels: (1) micro level; (2) meso level; and (3) macro level (Kjellberg and Helgesson, 2006). Above each of these three levels, there is a meta layer that helps to make salient how these levels evolve over time. Each level of context frames service-for-service exchange in a way that informs value co-creation uniquely at that level (Dopfer et al., 2004; Andersson et al., 2008; Storbacka et al., 2009). And the meta layer represents evolution of these levels, which occurs simultaneously. Capturing these various aspects requires oscillating foci to each level or layer, as shown in Figures 1 and 2. Each level is discussed below.

### *Micro-context: Framing exchange among actors as dyads*

Context at the micro or individual level frames exchange as it occurs among individual actors. The important process of exchange at this level is direct service-for-service exchange. That is, each actor draws on its resources and competences to directly serve another actor. The context of this service-for-service exchange is a dyad, which consists of two actors and the service-for-service exchange between them. More important, this is a reciprocal dyad because both actors serve each other, which is an important aspect of value co-creation because both actors are active participants in the exchange process. This is shown in Figure 2a and on the first line of Figure 1: two unique actors (*a* and *b*) are joined by a service-for-service exchange link (*s*).

### *Meso-context: Framing exchange among dyads as triads*

Context at the meso level frames exchange as it occurs among dyads. The important process of exchange at this level is the indirect service-for-service exchange that occurs between actor *a* and actor *c*, as shown in Figure 2b and on the second line of Figure 1. As can be seen, actor *b* directly serves both actors *a* and *c* (and vice versa), but actors *a* and *c* indirectly serve one another through actor *b*. That is, actor *b* directly serves two of the actors, while the other actors indirectly serve each other through their service of actor *b*. Stated differently, two actors indirectly serve one another by

Multi-Levels of Context	Unit of Analysis	Service-for-Service Exchange Among	Context Revealed Through	Contextual Framing of Exchange
<i>Static Micro-Context</i>	Dyads	Actors	Direct Service-for-Service Exchange (Freeman 1977, Barney et al. 2001, Madhvaram and Hunt 2008)	
<i>Static Meso-Context</i>	Triads	Dyads	Indirect Service-for-Service Exchange -includes direct service (Hakansson and Snehota 1995, Gronroos 2006, Gummeson 2006)	
<i>Static Macro-Context</i>	Complex Networks	Triads	Complex Service -includes direct and indirect service (Bagozzi 1975; Achrol and Kotler 1999, Araujo and Easton 2005, Kogut 2000, White 2002)	

Dynamic Meta-Layer: Service Ecosystems (Giddens 1979, DiMaggio and Powell 1983)

Figure 1. How Context Frames Exchange



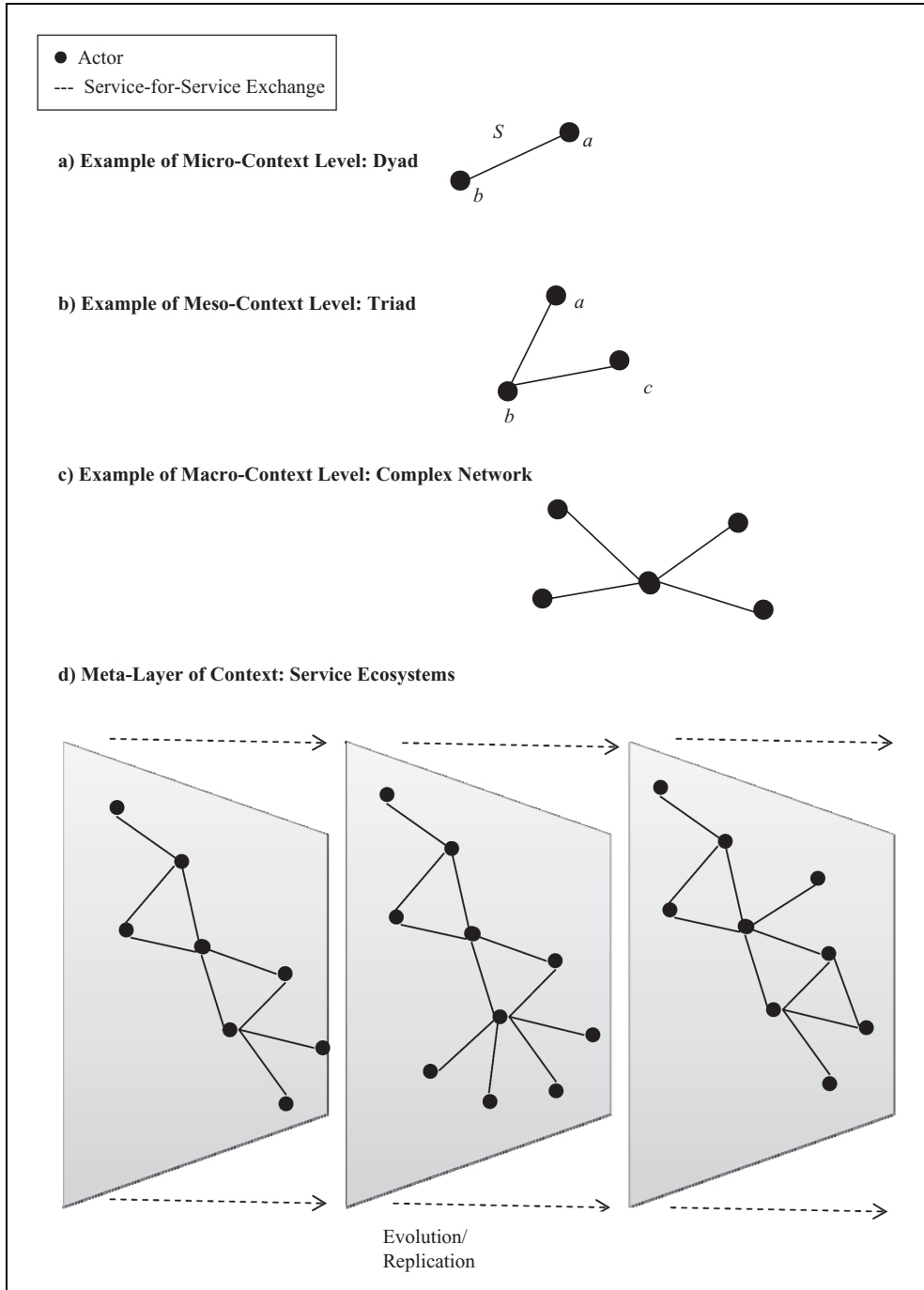


Figure 2. Rethinking context

servicing the same actor. The prototypical context of this service-for-service exchange is a triad. More specifically, this is an intransitive triad because the three actors are not all directly connected, which is important because it is not necessary for actors to be directly connected to serve one another and co-create value.

### ***Macro-context: Framing exchange among triads as ecosystems***

Context at the macro level frames exchange as it occurs among triads. The important process of exchange at this level is complex service, or the synergies of multiple simultaneous direct and indirect service-for-service exchanges that enable actors to serve in a particular context, as shown in Figure 2c and on the third line of Figure 1. Each triad draws on its resources and competences, and applies them for a beneficiary in a particular context. The context of service-for-service exchanges at the macro context is a complex network. More important, the notion of a complex network is a fundamental aspect of value co-creation because of how actors, dyads, and triads create synergy among multiple simultaneous direct and indirect service-for-service exchanges.

### ***Layer of meta-context: Framing exchange among complex networks as service ecosystems***

Context at the meta-layer frames exchange as it occurs among complex networks. At the meta-level, the notions of time and replication are introduced (Giddens, 1979). Specifically, practices, routines, activities, or processes may be replicated at any of the three levels of context. Based on this, the important process of exchange at this level is institutionalization, or the process by which various networks of actors become legitimized (or delegitimized) with respect to larger societal systems (DiMaggio and Powell, 1983). Included within this notion is replication, especially of institutions, which paradoxically creates dynamically changing contexts at the same time that it also introduces stability to the system.

As shown in Figure 2d and Figure 1, this occurs when complex networks are sustained by the reciprocal service provision of multiple actors, dyads, triads, and complex networks that are accessing multiple resources. As shown in Figure 2, this is a complex multi-dimensional evolution that occurs simultaneously in three dimensions: across levels of context, over time, and through replication. When complex networks successfully institutionalize resources, they become joined together as a *service ecosystem*, or ‘a spontaneously sensing and responding spatial and temporal structure of largely loosely coupled value proposing social and economic actors’ interactions through institutions and technology, to (1) co-produce service offerings; (2) exchange service offerings; and (3) co-create value’ (Lusch et al., 2010: 31). In other words, the meta layer covers all the levels of service-for-service exchanges such that they together constitute service ecosystems. The notion of a service ecosystem is a fundamental aspect of value co-creation because it acknowledges how large-scale social structures and institutions evolve relative to the individual service efforts of actors, dyads, triads, and complex networks.

## **How context frames markets**

As discussed, because every actor itself integrates resources through service-for-service exchanges with other actors, the value creation space extends well beyond direct actor-to-actor exchanges (i.e. ‘firm-firm interactions or firm-customer interactions). Service directly and indirectly joins actors together as dyads, triads, and complex networks into service ecosystems such that direct

individual exchanges occur at each level and simultaneously in the 'context' or meta layer of networks-with-networks and networks-within-networks. The exchange processes and the resulting links among actors constitute markets, but they transcend space and time. Context frames these processes and links, and begins to clarify how resources and service contribute to value co-creation and the co-creation of markets.

How exchange is framed by context is a fundamental aspect in the study of markets and value co-creation that requires further exploration. Viewing exchange at each level, as embedded in the context of the other levels, can be a fruitful area of inquiry. For example value co-creation can be viewed from both an actor's unique individual perspective within a dyad, as well as from an omniscient general perspective of service ecosystems. The actor perspective can only be understood from within the actor's direct context, while the service ecosystem perspective can only be understood from an omniscient general perspective. However, neither perspective is mutually exclusive; rather, each perspective occurs and must be understood in the context of the other perspectives.

As a result, the service activities of an actor – that is, an actor's individual value co-creation efforts – are a function of its simultaneous embeddedness within multiple dyads, triads, complex networks and service ecosystems. Stated somewhat differently, an actor's ability to serve is a function of its unique context which includes the micro, meso, and macro levels – as well as the dynamic meta layer. Context is multidimensional in that it is level-specific while being embedded in successive levels that are of a temporal nature. In this sense, practices and transformations are temporal replications of rules, or institutions, that facilitate exchange processes. Thus, context is an important dimension of value co-creation because it frames exchange, service, and the potentiality of resources from the unique perspective of each actor, and from the unique omniscient perspective of the entire service ecosystem. It is for this reason that Vargo and Lusch revised the somewhat G-D logic-oriented concept of 'value-in-use' to a more S-D logic-friendly concept of 'value-in-context' (Vargo, 2009; Vargo et al., 2009).

## Conclusion

The *Market* is simultaneous, continuous exchange, while *Markets* emerge from simultaneous, continuous processes at different levels and layers of context. As described above, Figure 1 demonstrates that each level is nested among the other levels and together they simultaneously evolve in the meta layer. The work here suggests that markets are created when actors, dyads, triads, complex networks, and service ecosystems evolve through unique service provision efforts. Context frames these processes. This has been more broadly studied as the co-creation of markets.

The ability to deal with time (forward and backward) conceptually appears to be a unique human trait that allows humans to evolve as a species not only through biological replication, but also through conceptual or institutional replication. This occurs because humans are able to integrate the past and present with the future. Further research is needed to distinguish empirically among these levels and layers, and also to relate them more explicitly to one another.

The definition and measurement of value processes according to this framework requires further empirical research. The micro level, meso level, macro level, and meta layer evolve in response to and in synchronization with one another, but the evolutionary reactions may be different at each level. Empirical research is needed, for example, to establish how triad counts (Skvoretz and Faust, 1999) can answer value-related questions from a marketing perspective: Which types of triads are more prevalent in specific contexts? Why do these triads persist in these specific contexts? How

does the conceptualization of markets change when reciprocity is introduced at the complex network level or at the dyadic level?

Most useful in this framework is the absence of the dichotomy between firms and their 'customers', which is replaced with a collective conceptualization of actors based on resources, service efforts, and contexts (Vargo and Lusch 2011). This allows marketing scholars to think more deeply about the interrelationships among different types of actors, along different levels and layers of context – and relate them to one another within a unified framework. Such a framework lays foundation for service-for-service exchange as the basis for a systems perspective of markets. Within this, the notion of reciprocal service-as-resources-applied-for-benefit offers insight on notions of power, ownership, control, and property rights in modern-day markets. Many actors involved in service-for-service exchange have been understudied in their collective influence on markets, marketing, and marketing theory.

Put simply, individual actors pursue value through service-for-service exchanges that are the basis of dyads, triads, complex networks, and service ecosystems. Markets are simply collections of individual actors reconciling tensions in their direct contexts with respect to indirect forces from overlapping complex networks. Over time, these can be viewed as service ecosystems, within which value lies at the tensions of micro and macro pulls. It is because of a need to reconcile these tensions that markets evolve.

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