

**THE VALUE CO-CREATION CROSSROAD OF  
SERVICE-DOMINANT LOGIC AND NETWORK THEORY**

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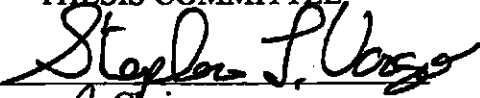
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## **ABSTRACT**

Conventional models of economic exchange limit the understanding of value-creation to a firm's output and the price a person is willing to pay, value-in-exchange. The present research addresses the inadequacies of such models through the synthesis of two growing streams of marketing thought, service-dominant logic and network theory. At this crossroad, a framework for value *co-creation* is presented, which suggests that *service* is the underlying basis of all exchange and that the service recipient (e.g., customer) ultimately derives and determines value, through value-in-use. The proposed model unites value-in-exchange and value-in-use under one process of value co-creation, which is composed of three elements, the accessibility, adaptability and integratability of operant resources (e.g., knowledge and skills), within a system of service-for-service exchange. Seven research propositions are presented based on the notions that value derived through co-creation is heterogeneous for each actor and influenced by the configuration and quality of its surrounding network.

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## INTRODUCTION

The creation of value is the primary purpose of economic exchange. According to Bastiat (1860, p. 103), “exchange does more than take note of values or measure them; it creates them.” Contrary to Bastiat’s argument that value is created through the process of exchange, in marketing, the creation of value has traditionally been recognized as the responsibility of the firm. Conventional models of value-creation depict the firm’s production of a market offering, which is embedded with value for a customer to consume. Such models limit the understanding of value-creation to the firm’s production and operational activities focused on value-in-exchange, often recognized as the price a person is willing to pay (Smith 1776/2000; Porter 1985). Advances in communication technologies (e.g., the internet) have raised awareness on the customer’s contribution to the creation of value and the inadequacies of firm focused models of value-creation.

Four major issues arise when observing complex processes of exchange within a firm-centered framework: 1) the exchange observed is unidirectional and taken out of context from the market and society, 2) roles of production and consumption are delineated between the firm and the customer, and customer competences are left out of the value-creation process, 3) value for the firm is focused on value-in-exchange and separated from value for the customer, sometimes recognized as value-in-use, and 4) the understanding of value-in-exchange is limited to monetary value. Increases in globalization and ubiquitous access to information demand attention toward the socioeconomic context and interdependent nature of exchange, and reveal the need for a comprehensive framework for studying the creation of value for all parties of exchange. Recently, there has been a pivotal shift in the understanding of value-creation, from the

dyadic exchange between a “producer” and a “consumer” (Porter 1985), to an interactive process among various economic actors, including firms, individual customers, and other stakeholders (e.g., Normann 2001; Prahalad and Ramaswamy 2004; Vargo and Lusch 2004).

### **Broadening the Scope of Value-Creation**

While the concept of value-creation has been studied by marketing academics since the beginning of the 20<sup>th</sup> century (Vargo and Lusch 2004), Porter (1985) is well known for formalizing the firm’s process of creating value with his “value chain.” This model focuses on increasing efficiency in the firm’s value-creation and delivery processes through a linear framework of interdependent activities, called “value activities.” Porter’s value chain framework includes the physical creation of goods as well as support mechanisms and internal infrastructure. Although Porter (1985) also recognized external linkages through supply chains, his framework remained linear and maintained the dichotomous roles of “producer” and “consumer.” Increases in communication technology and globalization have transformed the shape and concentration of the market, and led to the reexamination of the process of exchange. It is increasingly evident that conventional models of value-creation do not capture the entire process of active participation among numerous parties in an exchange.

Unprecedented speeds of information transfer have increased the complexities of the market in recent years. According to Bastiat (1860), with the multiplication of actors in exchange, the potential for value-creation grows as well. Bastiat (p. 72) claimed “there is better employment of labor, talents, natural resources, capital, and, consequently, there

is more to share. So much the better if three, ten, a hundred, a thousand, a million men join the association.”

Recent literature in marketing and management discuss the creation of value that continues outside the functions of the firm, and suggest that value is not created by a firm’s production output; rather it is determined by customers through the process of use (Grönroos 2006). The process of creating value-in-use, includes accessing, adapting, and integrating available resources, both tangible and intangible. Two growing streams of marketing thought, service-dominant (S-D) logic (Vargo and Lusch 2004) and network theory (e.g., Achrol and Kotler 1999; Gummesson 2005; Hakansson and Prencert 2004; Iacobucci 1996), contribute to the reexamination of value-creation. The synergetic intersection of these research streams provide a framework for emerging ideas of the creation of value to be examined.

### **A Value-Creation Crossroad**

When S-D logic and network theory are examined under the context of value-creation, distinctions among economic actors and their roles as producers and consumers become blurred, and a pattern of similar viewpoints emerges. According to Gummesson (2006, p.350), “when the complexity and context of marketing is addressed it is obvious that the roles of producer and consumer are ambiguous, not clear cut.” S-D logic argues that market complexities increase the use of indirect exchange, which masks the fundamental exchange of service-for-service and the customer's role in value creation (Vargo and Lusch 2004, pp. 8-10). Network theory identifies the market as a dynamic, interactive system that infinitely connects individuals and groups of individuals. Briefly, S-D logic

argues for the application of knowledge, or 'service', as the basis of exchange and provides insight on the interdependent nature of value-creation, while network theory establishes a complex framework for ongoing, multifaceted relationships to be examined.

The S-D logic of marketing (Vargo and Lusch 2004) contributes to the discussion of value-creation by exposing the inadequacies of a framework centered on the firm and driven by value-in-exchange. S-D logic argues that the firm cannot create and deliver value; value is ultimately determined by the customer through use. Thus, the customer is *always* considered a co-creator of value. Within this mindset, 'service' or the "application of specialized skills and knowledge" is the basis of economic exchange (Vargo and Lusch 2004, p. 6). The service-centered view argues that value is fundamentally created through the application of operant resources (e.g., knowledge and skills), which are sometimes transmitted through operand resources (e.g., tangible goods). S-D logic extends the focus of value-creation beyond value-in-exchange to the process of value-in-use, which includes accessing, assimilating, applying and sharing operant, and sometimes operand, resources. This process requires a framework that reflects market complexities and interdependent relationships in a web of exchange.

Network theory provides a dynamic framework for examining complex processes of exchange (e.g., Gummesson 2005; Hakansson and Prencert 2004; Iacobucci 1996). Research in this area informs S-D logic's focus on value-in-use by extending the value co-creation perspective beyond the dyadic context of traditionally accepted value-creation models, which focus on transactions between a firm and its customers. Although human networks have always existed, as technology increases the complexity and speed of information transfer, the study of networks as markets becomes increasingly critical to

the understanding of value-creation. The network perspective broadens the framework of exchange to include multifaceted interactions involving a number of diverse economic actors.

At the S-D logic/network theory crossroad, value-creation is viewed from the perspectives of all parties of an exchange. Value-in-exchange and value-in-use are unified through a pluralistic perspective of the process of value co-creation; rather than considered as two separate outcomes. Within the value co-creation framework, exchange is conducted in order to render service (apply the knowledge of others) with the intention of bettering one's circumstance through value-in-use. While value co-creation is driven by value-in-use, value-in-exchange remains a critical component for exchange and the co-creation of value.

From a value co-creation standpoint, value-in-exchange is the negotiated measurement in exchange that provides access to immediate and/or delayed service for all participating parties. Each party in exchange proposes value and receives a value proposition. Value-in-exchange is often recognized in the form of money, but it is also found in the proposed value of an offering. The value derived from value-in-exchange is found in its ability to provide access to service at convenient times and locations. Value-in-exchange enables each party to have the flexibility of accessing service when and where needed.

Value co-creation is not limited to a single exchange event; rather it occurs through the application (access, adaptation, and integration) of knowledge and skills from multiple resource providers, and is influenced by shape of the network and interaction among participating economic actors. Because existing knowledge and environments

differ, the value determined through use is heterogeneous in nature. Thus, value co-creation relies highly on the quality of an actor's surrounding network. The condition of networks, or service systems, are influenced by their configurations and ability to provide access to operant resources when and where needed, meeting time/space/actor specifications. The configuration of each actor's service system influences its time/place resource accessibility and impacts the adaptability and integratability of resources derived through exchange (Normann 2001). Modeling the process of value co-creation will establish a framework for understanding the underlying essence of service-for-service exchange and provide insight on formalizing a theory of value co-creation.

### **Purpose**

The purpose of this thesis is to contribute to the understanding of the value-creation process. This exploration rests in the synthesis of two influential streams of marketing thought, S-D logic and network theory, and the unification of value-in-exchange and value-in-use. First, a literature review will explore the long-standing debate surrounding the definition of value and the divergence of the two types of value, value-in-exchange and value-in-use. Then a brief overview of the division of labor and the need for exchange will be examined and the dominance of firm-centric models will be discussed. The following sections investigate S-D logic and network theory and their contributions to the understanding of value-creation in a complex, knowledge driven market. At the intersection of these two streams of thought, an archetype of value co-creation is proposed that reflects a system of service exchange, which requires both types of value, but is driven by value-in-use. The proposed value co-creation model is composed of

three main elements, accessibility, adaptability and integrability, which are examined and provide a foundation for seven propositions of value co-creation. An additional model is presented that indicates the influence that system configuration has on the process of value co-creation. Finally, implications are presented on how the understanding of value co-creation, as a process within a system, reflects the dynamic and evolving market and influences various dimensions of value-creation. Various opportunities for future research are discussed and directions for a theory of value co-creation are explored.



## **HISTORICAL PERSPECTIVES OF VALUE AND EXCHANGE**

Before delving into emerging ideas on value-creation, it is important to look at the historical treatment of value and economic exchange. As far back as Aristotle, the difference between “use value” and “exchange value” has been examined and deliberated. The process of exchange has also been inspected and argued for as both a means of gaining economic wealth and a critical activity for creating value. The discussion of these concepts has continued for centuries within a variety of scholarly arenas, and has become an underlying influence of the development of academic disciplines such as economics and marketing. The dominant paradigms in these fields have remained largely focused on the firm's perspective of value, particularly exchange value. However, a close look at the process of exchange reveals the interdependent nature of the market and the need to understand value from various viewpoints.

### **The Value Debate**

Aristotle is recognized for being the first to divide the meaning of value into two categories, “use value” and “exchange value” (Fleetwood 1997). He defined use value as an individual's collection of substance, and established its differentiated and heterogeneous nature. While his understanding of use value was fairly straightforward, Aristotle had difficulty in defining and measuring exchange value.

Exchange values are more complex. When one writes 1 hamster = 20 pencils it is not obvious what the commensurable dimension is. Such an equation is meaningless until one knows by which property they can be rendered commensurable... There is only one common substance that renders incommensurable commodities commensurable – although Aristotle does not know what it is. Whatever it turns out to be, one refers to this substance as value. The measure of this substance is exchange value. (Fleetwood (1997, pp. 732-733)

Aristotle deliberated over two substances that he believed could be considered commensurable, money and need, and eventually rejected them both. He decided that money could not be a measure of value because in order for money to measure substance, the substance itself must already be commensurable. Supporting Aristotle's argument, Meikle (1995, p. 22-23) explained that "a measure does not create the property which it measures." Similarly, although Aristotle believed that 'need' was what held the process of exchange together, a person's need lacked a unit of measurement and was rejected. When he attempted to combine the two, using money as the measurement of need, he deduced that although something holds parties of exchange together, it is not hold the same value as the substance exchanged. Ultimately, Aristotle was never able to clearly define exchange value and left the debate open to the scholars who followed.

"Aristotle distinguishes between use value or utility, and exchange value (4<sup>th</sup> c. B.C., I iii, 10). However, it is the Medieval Schoolmen who give utility [use value] its primacy of position in economic analysis, arguing that the origin of economic value lies in the needs of consumers" (Dixon 1990, p. 338). During the centuries following, use value was repeatedly acknowledged by those who recognized the role of satisfaction and fulfillment in value. Galiani (1751, p. 304) expressed, "It is certain that nothing has a price among men except pleasure, and that only satisfactions are purchased" (see Dixon 1990 for history of use value). The definition of use value was widely accepted among early schoolmen and economic scholars and incurred minimal debate. However, the debate over the meaning and measure of exchange value continued through neoclassical economics and into classical and modern eras.

Adam Smith's (1776/2000) *The Wealth of Nations* laid the foundation for modern economic thought and reintroduced both use value and exchange value. According to Smith (1776/2000, p. 31 emphasis in original), "the word VALUE, it is to be observed, has two different meanings, and sometimes expresses the utility of some particular object, and sometimes the power of purchasing other goods which the possession of that object conveys." Smith called them "value-in-use" and "value-in-exchange" respectively, and explained that "the things which have the greatest value in use have frequently little or no value in exchange; and on the contrary, those which have the greatest value in exchange have frequently little or no value in use" (Smith 1776/2000, p. 31). This distinction continued the historical debate on value and established a paradox limiting the "generalizability" of future economic, and eventually marketing, studies. (Vargo, Lusch and Morgan 2006, p. 31).

While Smith acknowledged the importance of value-in-use, his work focused on value-in-exchange. "Smith's focus on exchange value represented a departure from the more accepted focus on value-in-use, and it had critical implications for how economists, and later marketers would view exchange" (Vargo and Lusch 2004, p. 6). Smith dedicated his attention to value-in-exchange and attempted to resolve the issue of commensurability by acknowledging labor as the 'real' measure of exchangeable value:

Labour was the first price, the original purchase-money that was paid for all things. It was not by gold or by silver, but by labour that all the wealth of the world was originally purchased and its value to those who possess it, and who want to exchange it for some new productions, is precisely equal to the quantity of labour which it can enable them to purchase or command (Smith 1776/2000, p. 34).

After recognizing labor as the real value of exchange, Smith noted the challenges faced with measuring labor and directed his work toward commodities and their monetary value (1776/2000, p. 34-35):

But though labour be the real measure of the exchangeable value of all commodities, it is not that by which their value is commonly estimated. It is often difficult to ascertain the proportion between two different quantities of labour...Every commodity besides is more frequently exchanged for, and thereby compared with, other commodities than with labour...the exchangeable value of every commodity is more frequently estimated by the quantity of money, than by the quantity of either labour or of any other commodity which can be had in exchange for it.

Smith (1776/2000, p. 37) distinguished between the real price, labor, and nominal price, money, for commodities in exchange, “Labour alone, therefore, never varying in its own value, is alone and real standard by which the value of all commodities can at all times and places be estimated and compared. It is their real price; money is their nominal price only”. Although Smith recognized labor as the real value of exchange, he resolved his challenges in measuring labor by focusing on commodities and accepting money as the most common measurement for exchange value. Although he acknowledged the real price of value, the majority of Smith’s work focused on nominal value and his normative views on the efficiency of the division of labor and its contribution to social well-being and increasing the wealth of England (Vargo and Lusch 2004).

### **The Division of Labor and Need for Exchange**

Smith (1776/2000) believed that the division of labor enabled individuals to develop specific skills to more efficiently produce large quantities of goods. Smith used the separation of specialized skills, which had been discussed since the time of Plato, to establish the premise for his nominal argument that the division of labor would ultimately

increase business productivity and wealth for the firm and/or nation. Smith (1776/2000, p. 3) said that “the greatest improvement in the productive powers of labor” was due to its division, made possible by specialization. However, Smith also acknowledged that specialization would increase limitations on individual access to necessary resources without exchange and suggested that a person’s ability to access the resources of others depends on the value of his labor.

But after the division of labour has once thoroughly taken place, it is but a very small part of these with which a man’s own labour can supply him. The far greater part of them he must derive from the labour of other people...The value of any commodity, therefore, to the person who possesses it, and who means not to use or consume it himself, but to exchange it for other commodities, is equal to the quantity of labour which it enables him to purchase or command. (Smith 1776/2000, p. 33)

Smith’s emphasis on the division of labor clearly established the need for economic exchange. By engaging in specialized skills, each person must rely on others to access necessary resources for survival. The increases in specialization are positively related with increases in dependence on others. With increased attention on the need for exchange among scholars, came the recognition of the value derived from it.

Smith (1776/2000) extended his discussion on the division of labor by dividing labor into productive and unproductive categories. While his emphasis on the division of labor established the advantages of economic exchange, Smith's separation of labor types led to the firm's focus on 'productive' activities, which revolved around the manufacturing and distribution of goods. Smith (1776/2000) deemed productive labor as that which led to the output of tangible products that could be exported, and thus contributed to national wealth (Vargo and Lusch (2004). In Smith’s view, “wealth consist[ed] of tangible goods, not the use made of them” (Dixon 1990, p. 340).

Alternatively, Bastiat (1860, p. 63) argued that value was not found in tangible products and said that “value is merely the appraisal of the services exchanged, whether a material commodity is or is not involved in the transaction.” Bastiat (1860, p.67) also added to the discussion of value and exchange by explaining that, “exchange produces two phenomena: the joining of men’s forces and the diversification of their occupation or the division of labor.” He argued, “when two men exchange their present effort, or the fruits of their past effort, they are serving each other; they are rendering each other mutual service” Bastiat (1860, p.103). Importantly, he also recognized the impact of society and the increase in resources that are associated with the division of labor. Bastiat (1860, p. 72) proposed that “in the state of isolation, our wants exceed our productive capacities,” while “in society, our productive capacities exceed our wants”.

Bastiat (1860, p. 103) emphasized that “value is the relationship existing between two services that have been exchanged.” However, Bastiat’s efforts to influence economic thought away from the production of tangible goods remained largely unsuccessful. Many scholars (e.g., Say 1821; Mill 1848) yielded to the pressures of economic science and philosophy and eventually accepted Smith’s view of productive labor, focused on the output of tangible resources. Thus, the firm's focus on the production of tangible goods prevailed over time. Vargo, Lusch and Morgan (2006, p. 33) recognize a deeply-rooted, goods-dominant, logic that underlies the foundation of the firm's production-centered paradigm.

The G-D [goods-dominant] model of economic activity was more congruent with the political underpinnings of the political economists’ view of materialistic virtue and with the economic scientists’ desire to be compatible with the “scientific” and mathematical prerequisite of the natural sciences...Economics and the derivative disciplines of marketing and management inherited this G-D paradigm.

## **The Problem of the Value Paradox**

The economic foundation of a goods-centered logic, focused on value-in-exchange, has influenced the development of the study and practice of marketing. The debate between value-in-use and value-in-exchange was continued under the marketing umbrella. The underlying paradox established by Smith (1776/2000), led to confusion in the unification of the concept of utility among marketing scholars and sparked a debate between Alderson (1957) and Beckman (1957). Ironically, both scholars were arguing that marketing functions should be considered inclusive in the creation of utility. Alderson (1957, p. 198) argued from the value-in-use perspective and said that “there is only one kind of utility – namely the value which a product contributes to the potency of an assortment...all economic activities create a single form of utility.” However, Beckman defended his position from the value-in-exchange standpoint by explaining that “values are created through the addition of utilities, which are capacities in goods or services to satisfy human wants.”

The major issue in the Alderson/Beckman debate remained in the “conceptual foundations underlying the two discussions,” in which Alderson’s concept of utility as ‘increasing the potency of an assortment’ differs from Beckmans ‘selling value’” (Dixon 1990, p. 338). Dixon (1990) highlighted the issue of value types from a marketing perspective and emphasized the importance of understanding the differences between the two types of value. He explained the basis of the Alderson/Beckman debate by arguing that “the failure to recognize different meanings of ‘value’ leads to conflicting interpretations of economic theory.”

Although the discussion of use value has grown within the marketing discipline (e.g., Alderson 1957, Shostack 1977, Holbrook 1999), the influence of economic thinking and the firm's focus exchange value remains. Grönroos (2006, p. 354) explains that marketing's dominant view of value-in-exchange "seems to be based on a misunderstanding when macroeconomic analysis of value was transferred to microeconomics and from there further adopted by business economics." He adds, "The value-in-use notion has been an implicitly, if not explicitly expressed foundation of service marketing and relationship marketing."

In an effort to establish concepts and processes for marketing intangible products, the sub-discipline of services marketing began to surface in the late 1970s. Services marketing created an avenue for exploring and understanding the marketing of intangibles (Vargo, Lusch and Morgan 2006). When services marketing emerged, scholars differentiated services from goods with four distinguishing characteristics: intangibility, heterogeneity, inseparability, and perishability (Zeithaml, Parasuraman, and Berry 1985). As the subdiscipline developed, many of the concepts and models initially designed for services (e.g., relationship marketing and service and quality management) made their way into mainstream marketing. "In each case, these 'services' conceptualizations gradually began to displace, or at least subordinate, their [goods-dominant] counterparts" (Vargo, Lusch, and Morgan 2006, p. 38). Through this evolution, concepts such as relationship marketing, customer orientation, and customer relationship management emerged. However fragmented the areas of research may seem, many of these developing concepts and ideas point in a common direction, toward service.



## **THE SERVICE-DOMINANT LOGIC OF MARKETING**

The S-D logic of marketing, introduced by Vargo and Lusch (2004), argues that the basis of any exchange is *service*, “the application of knowledge and skills” (2004, p. 6). From this perspective, value cannot be created and distributed by the firm; it is ultimately determined by the customer through use. This mindset contradicts the pervasive G-D view that underlies production-focused models of value creation, in which “the purpose of economic activity is to make and distribute things that can be sold” (Vargo and Lusch 2004, p. 5). Traditional ideas of value creation strongly reflect the G-D logic, in which value is created by the producer, embedded in products and determined by value-in-exchange.

The service-centered view recognizes that the creation of value requires the interaction and the sharing of resources, or “service provision,” with other economic actors and cannot be created alone by any single actor (Vargo, Lusch and Morgan 2006). S-D logic fundamentally challenges the foundation of economic exchange presented under G-D logic. The traditional goods-centered logic emphasizes that the purpose of economic exchange is to make and distribute things that can be sold. Within a G-D logic perspective, a firm’s production process, which may include resources from other firms, embeds value or utility into a good and the value of the good is determined by the market price, or what the end customer is willing to pay. Additionally, under the G-D mindset, maximum efficiency is achieved by standardization and economies of scale.

The S-D logic view of the market argues that all exchange is based on service and that “when goods are involved, they are tools for the delivery and application of resources” (Vargo, Lusch and Morgan 2006, p. 40). Within the S-D logic perspective,

knowledge and skills are considered to be key resources for competitive advantage. The crux of the contrast between service-dominant and goods-dominant logic is found in their disparate focus on the basis of exchange. S-D logic is distinguished by its focus on operant resources (those which act upon operand and other operant resources), such as knowledge and skills, while G-D logic centers on the exchange of operand resources (that which an act or operation is performed on), such as goods. Within a service-centered view, "value results from the beneficial application of operant resources sometimes transmitted through operand resources (Vargo and Lusch 2004, p. 7). While the traditional view of marketing focuses on the distribution of production output, or operand resources, as the primary unit of exchange, the emerging service-centered view recognizes knowledge and skills, and the process of transferring and applying operant resources, as the fundamental basis of exchange.

Many of the concepts (e.g., value co-creation and operant resources) that S-D logic argues for are neither exclusive to nor invented by S-D logic itself. In fact, S-D logic is largely developed through the unification of existing and emerging views of exchange that stray from the traditional goods-centered logic. The service-centered view draws on historical arguments such as Smith's (1776/2000) definition of "real value" rooted in labor, Say's (1821) creation of utility rather than matter, Mill's (1848) classification of productive labor, and Bastiat's (1860) criticism of tying value to tangible resources. Vargo and Lusch (2004) lay the foundation of S-D logic with existing literature in marketing, economics and management literature (e.g., Gummesson 1995; Normann and Ramirez 1993; Shostack 1977) as well as influential marketing theories, such as resource-advantage theory (e.g., Hunt 2000) and core competency theory (e.g.,

Day 1994; Prahalad and Hamel 1990), network theory (e.g., Achrol and Kotler 1999; Normann and Ramirez 1993), and relationship and services marketing (e.g., Gummesson 1994; Grönroos 1994).

It is S-D logic's integration of seemingly separate ideas, aimed in a unified direction that makes it unique and more importantly, fundamental to marketing. S-D logic is grounded in nine foundational premises (FP), which are summarized by Vargo and Lusch (2006, p. 44 and 53):

- FP1. The application of specialized skill(s) and knowledge is the fundamental unit of exchange.
- FP2. Indirect exchange masks the fundamental unit of exchange.
- FP3. Goods are distribution mechanism for service provision.
- FP4. Knowledge is the fundamental source of competitive advantage.
- FP5. All economies are services economies.
- FP6. The customer is always a co-creator of value.
- FP7. The enterprise can only make value propositions.
- FP8. A service-centered view is customer oriented and relational.
- FP9. Organizations exist to integrate and transform microspecialized competences into complex services that are demanded in the marketplace (p. 53)

The ninth premise was later revised to include the integrative skills of individuals and households, or all economic actors (Lusch and Vargo 2006). These nine foundational premises provide insight to a provocative and growing marketing perspective. In many cases, the acceptance of this logic requires a paradigm shift from a firm-focused, goods-oriented view of the market, to a customer-centric, service-dominant perspective.

### **Service Defined**

The shift from a goods-dominant to service-dominant view of value-creation requires a deeper understanding of the term service and its relation to value. S-D logic's understanding of service has been recognized by various scholars to explain the basis of

exchange. Bastiat (1860, p.63) emphasized that the essence of value is found in the ‘appraisal’ of the service, not the material commodity, that is exchanged. He explained, “As regards the notion of value, it is a matter of complete indifference whether I render my fellow man a direct service...or an indirect service...but the value is in the service, in the intellectual and material effort made by one man for the benefit of another” (p. 63). In addition, Bastiat's view supported S-D logic's perspective on the value-in-use derived from service. He explained that, “*value* is in the service, in the intellectual and material effort made by one man for the benefit of another” (p. 63 emphasis in original). Like Bastiat, Lusch and Vargo (2006, p. 283) argue that the term *service* is the precise description for exchanging one’s resources for the benefit of another.

Gummesson (1995, p. 251) offers a more recent interpretation of service which says “activities render service; things render service,” reinforcing S-D logic’s FP3, “goods are distribution mechanisms for service provision.” Grönroos (2000, p. 48) supports this notion and describes services as “processes consisting of a series of activities where a number of different types of resources are used in direct interaction with a customer, so that a solution is found to a customer’s problem.” While G-D logic differentiates ‘services’ and ‘goods’ on the basis of distinguishing service attributes such as intangibility, heterogeneity, inseparability (of production and consumption), and perishability (Zeithaml, Parasuraman and Berry 1985), S-D logic argues for service-for-service basis of all exchange. Furthermore, S-D logic suggests that goods are in fact nested in service provision. Within this mindset, service is the root of all exchange, which is sometimes transmitted through the use of a material object, or good. To distinguish the difference between the traditional perspective of services and S-D logic’s

viewpoint, the authors use the singular term *service* is purposely used to refer to a process rather than a unit of output. S-D logic defines *service* as “the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself” (Vargo et al. 2006, p. 40).

Alternatively, from a S-D logic viewpoint, an economic focus on service is not a new phenomenon, nor does it lead to a new era of the economy (Vargo and Lusch 2004). Although the world is in a continuous state of evolution, ultimately “all economies are service economies” (Vargo and Lusch 2004, p. 10) and that the “application of specialized skills and knowledge is the fundamental unit of exchange” (p. 6). While attention toward service may become more evident as information technology and specialization increases, “services and the operand resources they represent have always characterized the essence of economic activity” (Vargo and Lusch 2004, p. 10).

### **The Fundamental Shift**

To accept the S-D logic perspective on value-creation, it is critical to distinguish the roles of customers, firms and resources as seen through both G-D logic and S-D logic lenses. It is also necessary to identify the meaning of value as well as examine the interaction between the firm and the customer under each mindset. The traditional G-D view focuses on goods, tangible units of output, as the basis of exchange. Through a G-D logic lens, value-in-exchange is the driver of value-creation. Operand resources are produced at surplus quantities and embedded with value by a series of activities conducted by the firm and its production partners, and marketed ‘to’ customers in exchange for money. The purpose of exchange is to increase wealth for the firm and the

measurement of value is the price a person pays. Within a G-D logic a firm's operant resources are embedded within operand resources and delivered to a customer.

Customers are treated as homogeneous, operand resources, and their main role is believed to be consumption and destruction of the value created by the firm. Vargo and Lusch (2004, p. 2) explain that under the goods-centered logic:

Customers, like resources, became something to be captured or acted on, as English vocabulary would eventually suggest; we "segment" the market, "penetrate" the market, and "promote to" the market all in hope of attracting customers. Share of operand resources and share of (an operand) market was the key to success.

From a service-centered view, goods are responsible for the transfer and application of operant resources (knowledge and skills) and provide an indirect avenue for service exchange and value-in-use. "The matter, embodied with knowledge, is an 'appliance' for the performance of services; it replaces direct service" (Vargo and Lusch 2004, p. 9). The creation of this value derives from the combined effort of a firm and its network partners, including employees, stockholders and other firms, and its customers.

In addition to utilitarian functions, S-D logic states that the service transmitted, even through goods, provides an increased level of satisfaction, initiating feelings such as happiness, confidence, and security. The resources accessed, adapted and integrated through value-in-use are fundamentally operant resources, sometimes transferred via operand resources. The assimilation and application of operant resources often result in the creation of new operant resources. This "higher-order" of satisfaction is created through ongoing use or experience between the customer and the offerings or value propositions of the firm (Vargo and Lusch 2004). Table 1 provides an overview of the

major differences between a S-D logic and G-D logic from the viewpoint of value-creation.

**Table 1: G-D logic vs. S-D logic on Value-creation**

	G-D Logic	S-D Logic
Value Driver	Value-in-Exchange	Value-in-Use
Creator of Value	Firm, often with input from firms in a supply chain	Firm, network partners and customers
Process of Value-creation	Firms embed value within “goods” or “services”, value is ‘added’ by increasing attributes	Firms propose value through market offerings, customers continue value-creation process through use
Purpose of Value	Increase wealth for the firm	Benefit from the service (knowledge and skills) of others
Measurement of Value	The amount of nominal value, price received	The utilitarian and/or social benefit accessed through use
Resources Used	Operant resources are embedded in operand resources and delivered	Operant resources are transferred, sometimes via operand resources, and new operant resources emerge
Role of Firm	Conducts value added activities to create value for customers to consume	Places an offering in the market and proposes its value
Role of Goods	Units of output, operand resources that distribute are embedded with value	Vehicle for operant resources, enables access to benefits of firm’s competences
Role of Customers	To ‘use up’ or ‘destroy’ value created by the firm	Co-create value through continued production, marketing, and distribution of a firm’s offering

S-D logic reflects the ideas of academics who argue for recognition of the customer’s active role in the value-creation process (e.g. Lusch, Brown and Brunswick 1992; Normann and Ramirez 1993; Prahalad and Ramaswamy 2000). Under this interactive view, firms can place an offering in the market and propose its value, but the customer’s involvement in the creation of value switches the customer from an operand

to an operant resource. While many proponents of the customers' active participation focus on the co-production aspect of collaborating and generating product development and design ideas from customer groups, S-D logic argues that "the customer is always the co-creator of value." In this new role, the customers' competences, (e.g., knowledge and skills) become operant resources for the firm and goods, when involved, are a vehicle for operant resources that enable access to benefits of a firm's competences. This may seem like a mere slant on the concept of co-production, however its significance is magnified when determining the meaning of value and understanding the depth of the interdependent relationships among firms and customers.

Lusch and Vargo (2006, p. 284) specifically address the difference between the co-production of value or co-opting customer competence (Prahalad and Ramaswamy 2000) and the co-creation of value:

The [co-creation of value] represents a rather drastic departure from G-D logic, which views value as something that is added to products in the production process and at point of exchange is captured in value-in-exchange (i.e. price). S-D logic, however, argues that value can only be created with and determined by the user in the 'consumption' process and through use or what is referred to as value-in-use...[Co-production] involves the participation in the creation of the core offering itself. It can occur through shared inventiveness, co-design, or shared production of related goods.

Lusch and Vargo (2006) explain that the customer is central to the 'co-creation' and 'co-production' of value and both are differentiated from the basis of G-D logic. However, S-D logic's premise that value is always co-created means that the firm can only make value propositions. Through the service-dominant lens, value cannot be created separately from the customer and requires the involvement of his/her active participation.



Ongoing interaction between the customer and the firm establishes an interdependent relationship where neither the customer nor the firm has adequate resources to create value independently. When the customer is recognized primarily as an operand resource for the firm, the relationship between the firm and the customer balances out. The customer is no longer viewed as an operand resource to be acted on. From the S-D logic view, customers are marketed “with” rather than marketed “to” (Lusch and Vargo 2006), and the creation of value is *always* a collaborative effort between the firm and the customer and cannot be determined by a single transaction. Furthermore, although creation is recognized as a joint effort, value is ultimately determined by the customer’s experience, use and satisfaction, value-in-use.

### **Driven by Value-In-Use**

S-D logic’s premise of co-creation says that “there is no value until an offering is used – experience and perception are essential to value determination” (Vargo and Lusch 2006, p. 44). Vargo and Lusch argue that the creation of value should be refocused on value-in-use because the firm’s role in value-creation is an intermediary part of the process and customers are ultimately responsible for determining value through the application of the firm’s offerings. They join other scholars (e.g., Alderson 1957; Shostack 1997) in arguing for a movement away from value-in-exchange toward value-in-use.

Value-in-use is always co-created with the customer through the “consumption” process of acquisition, usage and disposal (Holbrook 1987). The process is continuous and the value of a firm’s proposition is determined by the customer through integration with existing competences and other available resources. Normann (2001, p. 97) provides

additional insight to the term and process of consumption with two contrasting definitions. He refers to a dictionary that defines the term, 'consume,' as 'destroy', 'use up', 'waste' and the term, 'consummate' (a verb) as 'complete', 'perfect'. While the G-D logic heavily resembles the first definition of consume, S-D logic provides a process for consummation or completing and continuing to perfect the process of value-creation. Like S-D logic, the latter definition places the role of the consumer as a *value creator*, rather than *value destroyer* (Normann 2001).

It is imperative to note that by focusing on value-in-use, S-D logic does not omit the necessity of value-in-exchange. While S-D logic embraces value-in-use as the focal point of the value-creation process, it maintains that there is a purpose and a place in this process for value-in-exchange. Vargo and Lusch (2006, p. 49) argue that "value-in-exchange could not continue to exist if value-in-use did not occur." To illustrate their point, the authors refer to substances that have not been subject to economic exchange, such as the biosphere. In this sense, exchange is required for value creation once the resources needed cannot be attained naturally, such as breathing fresh air versus needing an oxygen tank.

The authors also acknowledge the importance of financial feedback to the firm. They explain that "when a firm sells its service (with or without a tangible good), it receives a monetary instrument (cash or the promise to pay). These monetary instruments are used to acquire other service (with or without tangible good) from suppliers, including employees" (Vargo and Lusch 2006, p. 49). Alderson (1957, p.198) explained how an assortment of resources increases value, "it creates value in the sense that there is greater value-in-use after the exchange."

The S-D logic process of co-creating value is focused on value-in-use, but mediated and monitored by value-in-exchange. The continuous process is driven by operant resources and “because firms can always do better at serving customers and improving financial performance, the service-centered view of marketing perceives marketing as a continuous learning process (directed at improving operant resources)” (Vargo and Lusch, 2004, p. 5).

### **Value Co-Creation**

The creation of value is a strategic process that links together the “only two resources that really matter in today’s economy: knowledge and relationships” (Normann and Ramirez 1993, p. 65). S-D logic conceptually reframes the process for value-creation by giving the customer an integral role. A service-centered logic does not discard the need for traditional and tactical procedures derived from the G-D logic, however it does oppose the overall domination of a goods-logic. Normann (2001) reinforces the service logic approach to value-creation and “value creating systems.” He says that a service logic “forces us to shift our attention from *production to utilization, from product to process, from transaction to relationship*. It enhances our sensitivity to the complexity of roles and actor systems. In this sense the service logic clearly *frames* a manufacturing logic rather than replaces it” (2001, p. 98 emphasis in original).

### ***Complexities of the Market***

The process of exchange appears increasingly complex as it is more closely examined through the S-D logic lens. S-D logic’s FP2 explains that the fundamental unit of

exchange, service, is masked by indirect exchange. What is fundamentally an exchange of service-for-service, becomes a complicated web when organizations, monetized exchange, and multidimensional interactions are included. Vargo and Lusch (2004, p. 8) explain, “over time, exchange moved from one-to-one trading of specialized skills to the indirect exchange of skills in vertical marketing systems and increasingly large, bureaucratic, hierarchical organizations.” As organizations increased in size, specialization led to microspecialization, which eliminated the majority of interaction between those providing a service and those rendering one (Lusch and Vargo 2004). S-D logic argues that organizations, money and goods are only vehicles for exchange and that service remains the basis for all exchange.

Lusch and Vargo (2006, p. 411) recognize that there is a tendency to view organizations “as entities in and of themselves” without accounting for the employed individuals who generate and transfer knowledge internally and externally. In its revised version, S-D logic’s FP9 considers individuals, in addition to organizations, to be resource integrators. Lusch and Vargo (2006, p. 410) suggest that, “macro systems, which undoubtedly should be studied in their own right, come about or emerge from micro phenomena.” The authors explain that society involves a complex network of social and economic exchanges and although marketing management has traditionally been studied under the perspective of the firm, the understanding of service-for-service exchange requires a more micro-level approach. Thus, the service-centered view of marketing is inherently focused on the needs of customers and is highly relational (FP8). This micro-level of study observes individual human traits such as physical and mental skills and actions such as the division of labor (Lusch and Vargo 2006, p. 411). With the

increase of specialization, came the need for more interdependent relationships among individuals. Thus, the microspecialization of skills and knowledge increased the complexities system, interconnected through exchange.

### ***Interdependent Exchange***

One of the major differences between the traditional G-D logic and the emerging S-D logic is the latter's perception of customers, employees and organizations as operant resources. Within the S-D logic mindset, units of output are no longer the basis of exchange and the application of knowledge is recognized as the foundation of exchange (FP1) as well as the major competitive advantage of a firm (FP4). When service is directly exchanged for service, the importance of knowledge and its application becomes obvious and the customer's role as a value co-creator is clear (FP6).

Vargo and Lusch (2004, p. 6) use the activities of a farmer and a fisherman to illustrate the service-for-service nature of exchange. Through exchange, the farmer benefits from the fisherman's ability to catch fish and the fisherman benefits from the farmer's abilities, such as growing and harvesting wheat. This explicit example of service-for-service exchange supports Lusch and Vargo's (2006, p. 285) argument that "since 'service-for-service' implies all parties are both value creators and value beneficiaries, the implication is that the offerer/customer and supply/demand distinction vanishes." Within this mindset, the firm can only make value propositions (FP7). Vargo and Lusch (2004, p. 11) emphasize the relational aspect of exchange with FP8, saying "it is in this [service-centered] sense of doing things, not just for the customer but also in

concert with the customer, that the service centered view emerges. It is a model of inseparability of the one who offers (and the offer) and the consumer.”

Reinforcing this interdependent perspective are S-D logic’s FP6 and FP7, which state that “the customer is always the co-creator of value” and the “firm can only make value propositions,” respectively. As mentioned, one of the distinguishing features of S-D logic’s concept of value co-creation is that value cannot be produced by the firm, it can only be created with and determined by the customer. The value of a firm’s proposition is ultimately determined by the customer, through the process of consumption. While this concept differs from other co-creation/production concepts (Prahalad 2000) that invite customers to assist in the research and development of a market offering, S-D logic is not its originator. Gummesson (1998, p. 247) said “value-creation is only possible when a good or service is consumed. An unsold good has no value, and a service provider without customers cannot produce anything.” Additionally, Grönroos (2000) emphasized the importance of the value-creation process over the output of the firm by encouraging firms to create value, rather than attempt to distribute value, to customers.

### ***Continuous Process of Value Creation***

S-D logic’s focus on value ‘creation’, rather than value ‘production,’ is an innately continual process of enhancement. Bastiat (1860, p. 63, referencing Say 1821, emphasis in original) explains that humans are limited in their abilities, and they cannot make something tangible out of nothing, “however extensive our productive capacities may be, they cannot go so far as to enable us to *create*. It is not given to man, in fact, to add or subtract from the existing number of molecules.”

Essentially, value co-creation is the creation of value-in-use through the active participation of two or more economic actors and the direct and indirect integration of available resources (FP9). Under this mindset, the creation of value is continued through an ongoing process that passes through an intricate network of economic actors, with or without tangible appliances. Thus, the “creation” of value cannot be accomplished by any individual or group of actors. It is a continual process that involves interdependent relationships and the incessant transfer of knowledge.

Ballantyne and Varey (2006, p. 336) explain that “the time logic of marketing exchange becomes open-ended, from pre-sale service interaction to post-sale value-in-use, with the prospect of continuing further as relationships evolve.” Ramirez (1999, p.51) explains the shift from the industrial view of consumption to the emerging idea of value-creation, “while the industrial view customers as consumers destroy the value created by producers, in the alternative one customers create value; or more exactly co-create and even co-invent it both with their suppliers and their own customers. As a result there are no ‘final’ customers in this emerging framework.” From the S-D logic perspective, value-in-use is co-created through a process that encompasses pre-purchase information gathering, the act of exchange, and the use derived through the interaction of resources, which includes the transfer of operant and operand resources to others.

### **Framing Value Co-Creation**

Although the above discussion of S-D logic and value-creation contains a concentrated focus on the relationship between the firm and the customer, S-D logic recognizes that value-creation involves a multitude of economic actors. Lusch and Vargo (2006) explain

that the co-creation of value involves a firm and its customers, suppliers and other “network partners.” With value-in-use at center stage of a complex value co-creation process, S-D logic suggests that knowledge is ubiquitous in the marketplace and is generated by all actors in exchange.

S-D logic’s redirection of the focal point of value-creation, from value-in-exchange to value-in-use, uncovers inadequacies in traditional models of the value-creation process. It demands a new model of value-creation, one centered on the co-creation of value and heavily focused on the customer’s value-in-use. When exchange occurs between a firm and a customer, the customer takes on the responsibility of knowing how to use the firm’s offering. A customer’s access to knowledge and skills is dependent on existing internal competences and access to information through a system of service exchange. The value created in any exchange depends on resources outside the dyad of the firm and customer. Additional avenues of information are required to provide a customer with the knowledge required to optimize the application of a firm’s offering. A service-centered model of value co-creation must allow for complex and dynamic interaction among multiple actors with differing responsibilities in the exchange process. The framework for this system must be flexible enough to account for continuous movement and expansion for of wide variety of external variables included in the value-creation process.

Lusch and Vargo (2006, p. 285) support the use of network theory for examining value co-creation and suggest that “much could be gained in the elaboration and extension of S-D logic from a more explicit connection to the interactivity and networking literature.” Hakannsson and Prencert (2004, p. 91) make a distinct



connection between S-D logic and network theory by arguing that “all exchange activities are conducted in order to realize services”. Focusing on business networks, Hakannsson and Prekert (2004, p. 92) describe the networking process of exchange with a focus on service,

...exchange is seen as stemming from the realization of the potential services in resources, usually conceptualized as value (e.g. Snehota, 1990). Hence, business exchange activity comprises engagement in a mutual boundary-crossing value-creating process. The benefits are the activities of the potential services inherent in resources and are coloured by the contextual situation in which the exchange occurs.

Network theory presents a platform for the dynamic and multifaceted interaction of value co-creation to be studied. Networks provide the infrastructure to support the exchange of service among a variety of actors and aid the customer in co-creation value by providing access to a multitude of resources through exchange. When examined in the context of the market, rather than through the viewpoint of a single exchange event, it is evident that value creation does not begin or end with any single firm.

## **NETWORK THEORY**

The process of value creation continues through a nexus of ubiquitous exchange, and the transfer and generation of knowledge is infinite. According to Bastiat (1860, p. 96) “We are all producers and consumers, not of the thing, but of the value that we have produced. While we exchange things, we always remain the owners of their value.” The examination of exchange through a network perspective advances the understanding of societal evolution and technological innovation, and contributes critical insights to the discussion of value creation.

Network theory has an extensive history in natural and some social sciences, particularly sociology (Gummesson 2006). Gummesson (2006, p. 347-348), concludes that “society is a network of relationships in which we interact.” He also explains that there is “an overlap between the role of private life as a citizen and commercial life as a consumer.” Sociologists have been observing networks under social network analysis for over a decade and offer a basic understanding of human networks. Davern (1997) introduced the convergence of social and economic constructs through economic sociology and exchange networks. He argued for a social network approach for understanding socioeconomic relations and explained that networks are connected through social ties that are formed or disconnected when the social structure changes.

### **Markets as Networks**

Venkatesh et al. (2006) recognize the need for increased attention toward markets in marketing, and the social embeddedness of exchange. They argue, “Paradoxically, the term *market* is everywhere and nowhere in our literature. We often write this or that

market, yet have restricted our view of the market to economic exchange when it is only one of several types of sign systems” (Venkatesh et al. 2006, p. 252 emphasis in original). This calls attention to the structure of markets, which is extensively discussed in network theory. Models and concepts of the market as a network present a framework for the processes of marketing and exchange to be examined. Concepts of network theory were introduced to marketing and management largely through business-to-business (B2B) marketing and interorganizational theory (Gummesson 2005). Since its appearance in B2B literature, network theory has received increasing attention from general management and marketing scholars (e.g., Achrol and Kotler 1999; Normann and Ramirez 1993; Iacobucci 1996; Prahalad and Ramaswamy 2004; and Gummesson 2005). Iacobucci (1996, xiii) defines a network as a collection of actors (persons, department, firms countries and so on) and their structural connections (familial, social, communicative, financial, strategic, business alliances and so on).”

Bagozzi (1975) offered a framework that addressed the complexities of the market and addressed different types of exchange occurring within the context of marketing. He explained that “in reality, marketing exchanges often are indirect, they may involve intangible and symbolic aspect, and more that two parties may participate” (Bagozzi 1975, p. 32). The three types of exchange introduced by Bagozzi are restricted (two-party reciprocal relationships), generalized (‘univocal’ interactions among at least three parties), and complex (a system of mutual relationships among at least three parties). Bagozzi’s (1975) understanding of complex exchange reflects both the ‘value chain’ and network perspective of the market. He differentiates between complex chain exchanges (i.e. manufacturer, to retailer, to consumer) and complex circular exchange.

Bagozzi also recognized “vehicles” of exchange that provide insight to alternative measurements for value-in-exchange. “These vehicles include money, persuasion, punishment, power (authority), inducement, and activation of normative or ethical commitments. Products and services are also media of exchange” (Bagozzi 1975, p. 35). His explanation of the meaning of exchange (utilitarian exchange, symbolic exchange, and mixed exchange) addresses motivational issues and suggests qualities of value-in-use. Bagozzi (1975, p. 36) broadens the scope and purpose of exchange and argues that “marketing exchanges involve both utilitarian and symbolic aspects, and it is often very difficult to separate the two.”

It is evident that the connection of economic actors has been in existence as long as the function of exchange, therefore networks themselves are not new. However, the study of this relational and structural phenomenon remains in the early stages of discovery within the marketing discipline. Iacobucci (1996, xv) explains, “the goal of researchers working within the network paradigm is, to understand structures of relationships”. She argues, “Much of marketing is relational. Networks are an excellent means of studying relational phenomena. [Therefore] networks are an excellent means of studying much of marketing”. Gummesson (2006) argues for a grand theory of marketing to be based on “networks and their universal capacity to mirror reality by allowing for complexity, context and dynamism.” He supports the study of markets through networks by describing how networks are “a neutral, generic concept and can be applied in numerous ways, broader or narrow to signify a specific phenomenon.”

Similar to the way services marketing emerged, Gummesson (2005) explains how business-to-business (B2B) marketing developed separately from business-to-consumer

(B2C) marketing, creating two major categories of marketing. He mentions one of the possible reasons that has been noted for this separation is that the B2B products are thought to be developed from the initiative of the buyer or in close buyer-seller relationships. He notes the similarities in B2B marketing and services marketing research, as they both focus heavily on relationships and interaction.

Ford and Hakansson (2005) argue that business interactions must be studied under a network paradigm because business relationships cannot be understood through the perspective of a single company. They say that business relationships are inherently interactive and the actions of a single company are largely based on its internal interpretations of past and present relationships. Business networks recognize that each actor is heterogeneous in terms of its resources, needs and goals. Businesses cannot be categorized neatly into homogeneous groups such as customers, suppliers, competitors, manufacturers or retailers. Additionally, in such an interactive environment, the process or flow of resources cannot be linear or controlled by any one actor. While Gummesson (2006, p. 349) notes the origins of network theory in B2B marketing, he also acknowledges the applicability of network theory for all of marketing by arguing that “not only organizations live in networks but also consumers citizens, and employees.”

### **Embeddedness of Exchange**

Granovetter (1985, pp. 495-496) addressed the social and economic nature of exchange and described the embeddedness of economic activity and social structure and the inseparability of business and society, “There is evidence all around us of the extent to which business relations are mixed up with social ones...business relations spill over into

sociability and vice versa...it is not only at top levels that firms are connected by networks of personal relations, but at all levels where transactions must take place.” His argument suggests that economic exchange always takes place in the context of social interactions and that the overarching value of an exchange is derived from both economic and social benefit. Granovetter’s thoughts coincide with Bastiat’s (1860, p. 59) that claim “[Exchange] is society itself, for it is impossible to conceive of society without exchange, or to exchange without society.” Network theory offers consequences for such embeddedness, “despite the basic economic utilitarian purpose we have to consider the inclusion of social aspects...we have to consider the possibility that exchange, embedded in technical and social items and structures changes economic logic” (Hakansson and Prencert 2004, p.77). Johanson and Stromsten (2000) narrow this idea of economic and social embeddedness and present interlocking layers of value-creation, the exchange layer and the resource layer.

Johanson and Stromsten (2000) explain that value-creation is done through a network of multiple partners connected by a value realizing process in which all actors are better off after exchange. They believe that the value-creation process consists of two layers, in which the exchange layer is embedded in the resource or production system layer. The authors explain the different layers:

...a difference between the exchange layer and the resource layer is that the latter is more complex and extensive...resources connected do not only follow the exchange of resources. The resource layer is more tacit and more difficult to completely codify. The firm’s ability to realize a product’s value in the exchange is the result of how well it creates value in the utilization of its resource collection, which is bounded to the context the firm is a part of. The value of a specific resource arises from knowledge about what someone can do with it in combination with another resource. (Johanson and Stromsten 2000, p. 5)

The authors' definition of the resource layer is nearly identical with the explanations of value-in-use that have been discussed. Johanson and Stromsten (2000) also support the fundamental argument of service-for-service exchange by explaining that resources should not be considered as "inputs" in the process of production. They argue that it is the service generated, or function derived from the resource that ultimately creates value, and that identical resources can be used for different purposes depending on existing knowledge and environmental circumstances.

Johanson and Stromsten (2000, p. 3) argue that exchange contributes to the creation of value by suggesting that actors "involved in the exchange are better off after the exchange than before." Thus, the exchange transaction is embedded in the value-creation process and cannot be separated or isolated. This idea of embeddness removes the paradoxical implications of value-in-use and value-in-exchange and unifies both types of value into one process. While this process requires the facilitation and measurement provided by value-in-exchange, it is driven by and focused on value-in-use. The integration of internal and external resources made available in the market, by firms and other economic actors, is the determining factor of the value that is created through the process of exchange.

### **Network Characteristics**

According to Ford and Hakansson (2005, p.5) exchange does not take place within the context of a pair of actors. Within a B2B context, the value-creation process does not end with the companies that surround one single company, rather it continues beyond the control or influence of any one company. What happens in one business relationship has

the potential to create a ripple effect throughout the network. While not all changes in a relationship will directly result in changes in other relationships, certain issues, especially those related to technology, have a way of spreading (Hakansson and Prencert 2004). Focusing the network perspective on only one actor restricts the understanding of a truly dynamic market and its environmental factors (Ford et al. 2002).

The literature regarding business networks introduces several important characteristics and elements of networks. Ford et al. (2002) provides a basic model for managing business networks. This model connects three elements of a network: network pictures, networking and network outcomes. These elements will be examined in conjunction with other network theory literature, to expand the discussion of network theory beyond a businesses-to-business environment, to marketing and value-creation in general.

### *Network Pictures of Interaction*

Ford et al. (2002) recognize that all companies are members of a business network that involves a large number of active and heterogeneous actors. Each actor involved in exchange interacts with other businesses, seeking out solutions to a variety of problems that will likely impact other companies in the network as well. Although theoretically there is no limit to the size of a network and it is virtually scale-free, marketing interactions must be placed in context (Gummesson 2005, pp. 111-112). The use of 'network pictures' is critical in understanding the position and perspective of a company, or individual, in its surrounding network. As mentioned, the network has no central actor. However, each actor forms its own network picture based on past and present



experiences, relationships, problems and uncertainties and knowledge and skills.

Moreover, there are no absolute “types” of networks. Designated “types” of networks are actually the network picture seen from an alternative perspective in the network, the network picture changes based on the position of the individual actor.

Based on the understanding of network pictures, networks themselves have no boundaries and cannot be limited to one perspective. However, in order for an actor to efficiently and effectively interact with its surroundings, it must understand its position in the network and be aware of the resources available to it. This understanding relies on the experience and knowledge of the actor as well as the structural network features surrounding it. The network context of an individual actor includes three dimensions: who the actor is and who it is linked to, the activities performed by the actor and the way it is linked to other actors and the resources used in the network and the patterns of exchange among related actors (Anderson et al. 1994). The context of each individual actor is partially shared with other actors, especially those that are closely connected. When the term actor is used to describe network relationships, it is evident that the network is applicable to organizations and individuals alike.

Emerging research in economics, “inframarginal analysis” (Yang 2003), reveals a reexamination of the influence of individual specialization. This concept builds off of Smith’s original notion of real value and examines the process of exchanging labor. Rather than discussing the firm’s influence on individual resource acquisition, inframarginal analysis explains the process of an individual laborer’s contribution to the firm’s value proposition. Ultimately, inframarginal analysis explains that “before individuals make their decisions, no firm exists” (Yang 2003, p. 28). Additionally, the

firm itself is established only if individuals decide to use a labor market to coordinate their specialized labor. Inframarginal analysis says that the firm itself cannot create anything; it is really the coordination of specialized skills that collaborate efficiently to contribute to the process of value-creation.

### ***Interdependence in Networking***

Network interaction requires an interdependent level of involvement for all parties because no individual actor has all the resources it needs. Gummesson (2006, p. 292) explains, “[marketing] is not about either supplier centricity or customer centricity; it is about ‘balanced centricity’”. According to Ford and Hakansson (2005, p. 14) interdependence is an integral characteristic of interactive structures, specifically markets of exchange. Interdependent interaction requires “simultaneous elements of cooperation, conflict, integration and separation in the companies’ relationships” (Ford et. al. 2002, p. 2). Although dependence is often viewed as a negative characteristic, in this interactive world economic actors must take part in interdependent relations in order to access resources for problem solving and value-creation. Ford and Hakansson (2005, p. 14) explain this phenomenon within business interactions,

The interdependencies between actors relate closely to the fact that their respective resources are not isolated but are related to each other. This has at least two aspects: Firstly, an actor’s own physical, financial, human and technological resources form the basis for its operations...[but] it is only through interaction that the actor’s resources can be transformed into capabilities that are of value to others and hence form a basis for interdependence...Secondly, it is through interaction that the existing resources of other actors can be activated as counterparts to an actor’s own resources.

Interdependence is reflected in the networking aspect of the network model (Ford et. al. 2002), which expresses the interactions a company or individual has within the network. Among other things, networking is interactive and involves both cooperation and competition in creating value. Networking involves working “with, through, in spite of or against others” (Ford et. al. 2002, p. 8). It is also considered as “a universal phenomenon undertaken simultaneously as [firms] conform/confront, consolidate/create and coerce/concede” (Ford et. al. 2002, p.13). This means that each actor, or network partner, is working simultaneously, individually, collectively, and competitively to produce beneficial outcomes for one or more parties in the network. In sync with S-D logic’s viewpoint, once the interdependence in network relationships is apparent, the traditional roles of producers and consumers become unclear.

Inframarginal analysis examines the dual roles of each economic actor by arguing that “each decision-maker is a consumer-producer” (Yang 2003, p.27). Inframarginal decisions direct the division of labor and lead to specialization and the dispersing of resources throughout the network. These decisions are also known as networking decisions because they determine the group of individuals that a person will be connected with. One way the roles of producer and consumer are combined, occurs when a person makes an inframarginal decision to select a career, such as a medical doctor. Once he makes the decision to become a doctor and acts upon it, he will be connected with people in the medical field. As he advances in his career, the doctor will focus his resources on gaining knowledge and becoming specialized in medicine. The more specialized he becomes, the more he will be forced to rely on people for other necessary resources.

The roles of consumer and producer are consolidated in another manner, because although the doctor may be able to access external resources through exchange, he will need to continue creating value through use in order to render service from others. For example, if he needs the service a computer provides the doctor will have to make a purchase decision, buy a computer, know how to use it and eventually dispose of it. In reality, both of these perspectives are incorporated in a network interaction that continues the cycle of production, consumption, and production in the process of value co-creation.

### ***Incomplete and Process Driven Outcomes***

It has been suggested that a human in isolation will die. “Man in the state of isolation cannot survive; whereas, with man in society, the most elemental wants give way to desires of a higher order, and this process, tending always toward a more perfect condition, goes on without interruption or assignable limits” (Bastiat 1860, p. 61). Lusch and Vargo (2006, pp. 411-412) suggest that “An individual human can at best survive but without others cannot change the world. However, when individuals begin to interact with others and exchange the platform for changing the world is set...variety is stimulated and fostered when two parties specialize and learn from each other from marketplace exchange.” Therefore, once the availability of exchange is evident, humans discover knowledge and skills of others that can be used to improve their situation. However, once exchange takes place they are never fully satisfied and the process of exchange is continuous.

Ford et al. (2002, p.2) explains this concept within a business network context by explaining that “no company alone has the resources, skills or technologies that are

necessary to satisfy the requirements or solve the problems of any other and so is dependent on the skills, resources and actions of suppliers, distributors, customers and even competitors to satisfy those requirements” (Ford et al. 2002, p. 2). This means that any one actor requires a network of resources, accessed through partnerships with other businesses, in order to meet the needs of another. “The network setting extends without limits through connected relationships, making any business network boundary arbitrary” (Anderson et al. 1994, p.3).

The incomplete nature of each network partner requires the sustainability of value-creating activities. This is where the importance of the process is revealed. The service rendered from exchange may be needed again after the initial exchange has occurred. If exchange partners are satisfied, it is likely that the exchange will be repeated. If one, or both, of the partners is not satisfied, the process of collecting information, negotiating value-in-exchange, and assimilating and transferring knowledge will begin again. The examination of value co-creation through network system evidences its incomplete, process driven nature and constant state of change.

As knowledge is transferred throughout the network, new knowledge is created and transferred. “Consequently, a resource that is exchanged contains the combinations of several resources...therefore, the exchange of a resource between implies a realization of value, not the creation of the same” (Johanson and Stromsten 2000, p.2) The continuous cycle of knowledge transfer and generation fuels the economy and advances society. Even if all the tangible resources known to man were made available, without knowledge of how to use them there would be no utility, functional or otherwise. The process of value-creation would cease to exist. Within the context of a network, a single

firm does not have the capabilities to inform, and in a sense 'train,' its heterogeneous customers on its own. The difficulties in transferring operant resources establish the need for the strategic positioning and creation of network structures that support and drive knowledge transfer among all types of economic actors.

### **Network Configurations**

The expansive nature of the network reveals many different types of value-creating actors and relationships among them. Although the market connects a variety of interactions among different types of actors, the study of networks helps to identify levels of micro and macro interaction that are critical in inspecting different aspects of exchange. "The generality of the network idea enhances its power for analysis. Nodes may be people or concepts. Links may be social or logical" (Ward and Reingen 1996, p. 307). Although a general theory of marketing, or perhaps more appropriately markets, is needed to provide a basis for principles of exchange among a variety of actors, the examination of network perspectives or 'pictures' and surrounding configurations are useful in understanding various viewpoints and specific processes of exchange.

### ***B-2-B-2-C-2-B-2-C-2-C Interaction***

From an internal organizational standpoint, several marketing academics (e.g. Achrol 1997; Achrol and Kotler 1999; and Snow, Miles and Coleman 1992) have introduced emerging types of "network organizations". Achrol (1997, p.60) recognizes that "all organizations are internal networks, and all organizations participate in external exchange networks" and differentiates a "network organization" from "a network of organizations."

The study of network organizations provides insight to the reconfiguration of organizational activities and process of value co-creation from the firm's internal perspective. Achrol (1997, p. 56) addressed what appeared to be the emergence of the "age of the network" (Achrol 1997) and a "network economy" (Achrol and Kotler 1999) by explaining how networks have gained much attention from industrial restructuring. He described the downsizing of large-scale vertical firms through outsourcing and the removal of management layers. Firms in the 21<sup>st</sup> century are trending toward leaner, more flexible structures and focus on integrated partnerships and strategic alliances with suppliers, distributors and even competitors. Other environmental factors that have increased attention toward networks include globalization and technological changes, deregulation, workforce demographics, and advancing communications and computer technologies (Snow et al. 1992).

As mentioned, much of the existing research on network theory in marketing and management comes from the business-to-business realm and focuses on interaction among businesses. In many cases the businesses are connected through outsourcing functions such as manufacturing and IT, others, which Normann (2001, p. 107) calls "value constellations", and are linked through patterns that create innovative businesses and/or change the way value is created. Value constellations are not merely a reallocation of activities or outsourced functions of the firm; rather they are a coordinated group of activities and/or firms that construct an innovative, non-traditional, output.

In line with Normann's (2001) value constellations, a recent emergence of business collaboration has begun focusing on specific solutions to sometimes temporal problems, rather than long term operational activities. Business 'nets' have been

introduced as “intentional interorganizational structures which firms design and deliberately for specific purposes” (Moller and Svahn 2006). Nets rely on knowledge sharing and value co-creation among firms, with the understanding that the end customer ultimately determines value. Notably, Moller and Svahn (2006, pp. 988-989) emphasize the relationship of knowledge assimilation and the role of competence within the net, “As value activities are essentially based on knowledge, the level of determination is also related to the level of codification of knowledge. The aspect of how well known the capabilities underlying the value activities are is related to how easily the underlying knowledge can be accessed and shared.”

Focusing on individual customer competences in the discussion of value co-creation, Prahalad and Ramaswamy (2004) address customers’ needs to relate to others on the basis of common interests, needs and experiences. These “customer communities” enable consumers to communicate and share ideas and feelings, taking part in social exchange. The authors explain that the power of customer communities comes from their autonomous nature and independence from the firm. The influence of the communities stem from shared opinions and personal experiences that affect demand and reverse the traditional firm-to-consumer flow of marketing communications. While these customer communities have always existed, the introduction of the internet has drastically changed the shapes and span of these networks as well.

Integrating business and customer networks, Gummeson (2006, p. 349) offers a “tentative grand theory of marketing” called many-to-many marketing, which expands on characteristics of one-to-one marketing (Peppers, Rogers and Dorf 1999), such as customer identification, differentiation and interaction, and puts the relationship between



a firm and customer into the context of the market. Gummesson's many-to-many theory addresses various value-creating relationships among groups of businesses and individual consumers. Rather than focusing on business-to-business or business-to-consumer relationships, many-to-many marketing is said to encompass all B2B, B2C/C2B and C2C relationships.

### ***Experience Networks and System Density***

It is ultimately experience that integrates both social and economic resources and determines the value of a market offering. Experiences are achieved through the assimilation and use of available resources. Holbrook (1999, p. 8, emphasis in original) provides insight to the experience of a customer, "by *experience*, I mean that consumer value resides *not* in the product purchased, *not* in the brand chosen, *not* in the object possessed, but *rather* in the consumption experience(s) derived therefrom." The role of experience is central to the creation of value for the customer. Holbrook (1999, p. 9, referencing Morris 1941) explained, "in essence...all products provide services in their capacity to create need- or want-satisfying experiences".

Prahalad and Ramaswamy (2004) extend the concept of customer experiences with the introduction of 'experience networks'. The scholars argue that the quality of a customer's experience is based on the involvement the customer has had in co-creating it. Here, the healthcare field provides a good example of value co-creation. Patients are able to co-create value by integrating resources from doctors, counselors, and other patients. The co-created experience is unique to each person and varies depending on how each patient chooses to interact with available resources.

Value lies in the co-creation experience of a specific patient, at a specific point in time, in a specific location, in the context of a specific event. The co-creation experience originates in the patient's interaction with the network. It cannot occur without a network of firms collaborating to create the environment that allows the patient to undergo that unique co-creation experience. The network, not owned by any single firm, multiplies the value of the pacemaker to the patient, his family, and his doctors. The patient, by co-creating with the network, is an active stakeholder in defining the interaction and the context of the event. The total co-creation experience with the network results in value that is more personal and unique for each individual...the co-creation experience of the consumer becomes the very basis of value. (Prahalad and Ramaswamy 2004, p. 10)

Normann (2001, p. 96) emphasizes the service foundation in experience networks by describing the experience phenomena within the context of a 'value system'. His understanding of experience focuses on knowledge, relationships and an actor's position in the market. Individual objects are of minimal importance and relationships and market positions become key factors in value-creating systems. The information about objects and relationships are more valuable than the objects and actors themselves. In value-creating systems, value is derived from the knowledge of how to build and maintain long-term relationships through interdependent exchange. These types of interdependent relationships change the aspects of time and space in a network. The creation of value moves from a sequential process to a process of 'simultaneous, synchronous, and reciprocal' interaction.

The knowledge of the system and its offerings are more important than the system and an offering itself. The configuration of the value-creating system can compress and actually 'create' time. This is done by implementing the 'principle of *density*,' which Normann and Ramirez (1993, p. 69) define "as a measure of the amount of information, knowledge, and other resources that an economic actor has at hand at any moment in time

to leverage his or her own value-creation.” When the optimal combination of resources is mobilized for a specific situation, a given time and place, value will increase (Normann 2001). Normann (2001, p.29 emphasis in original) argues that information and knowledge are the drivers of value-creation. By packaging activities more densely and making them available at opportune places and times, the offering will actually free up time for other activities to be done.

Density is a measure of how well a firm can ‘dematerialize’ and ‘liquefy’ the utilization of an asset. In order to provide access to resources as the most opportune time and place, Normann (2001) says that firms should focus on their “ability to ‘break up’ or *unbundle*...to link, and ‘put together’ or *rebundle*” available offerings. He explains how an actor’s utilization of an asset is not isolated or focused solely on the present; it is assimilated with surrounding resources and considers future benefits of use.

The more we are interested in the *utilization* of an asset, the more we need to know how it fits into a context of future production and value-creation. Thus, the more interested we are in information about its performance and characteristics, its position in time/space related to other assets. Such *information* also enables us to evaluate the competence requirements for use, as well as appreciation of the risks involved. For the action (or deliberate non-action) we take related to an asset, *information about the ‘asset in context’* and not only the asset itself is critical to us.

Human interactions with technology have helped, not only to create new market offerings, but to reconfigure the market. “Positional value, based on system analysis and system design, becomes superordinate to, and frames intrinsic value. Services are activities (including the use of hard products) that make new relationships and new configurations of elements possible” (Normann 2001, p. 114). Normann (2001, p. 61) recognizes ‘Prime Movers’ as innovative firms that utilize technology in reconfiguring the market, and describes their competitive advantages:

**Prime Movers reintegrate and rebundle as well as disintegrate and unbundle...Prime Movers create cases of reconfiguration which seem to stem from a new design vision of an 'industry' or a broader system of value creation...Prime Movers tend to envision a broader Value-creating System (as opposed to technological innovation, a new product, or the simple exploitation of an economic imperfection) as the outcome of their strategy.**

**Normann (2001 p. 69) says that Prime Movers have a broad perspective of the market as well as value creation, "they look at the overall functioning and the larger overall system in which they themselves are a part". The strategic focus of Prime Movers stems from the core of their competence and result from an underlying mindset of innovation and continuous change. Rather than considering product life cycles, the Prime Mover understands and focuses on the "total value-creation contexts of the customer with which it works" (Normann 2001,p.70). In relation to a service system, Prime Movers stray from the traditional view of the firm's offering as a unit of "output"; rather offerings are viewed as "input" in the customer's value realization process.**

**Value-in-use is not limited to the current benefits of any offering; rather it encompasses the pre-purchase, exchange, use, transfer and disposal of any asset. Every customer experience is unique based on a distinct collaboration of resources and individual experience and knowledge. The combinations of resource application are limitless. Thus the goal is not to customize offerings for consumers, but to enable customers customize their own assortment of resources based on individual needs and desires. The configuration of a customer's surrounding network of resources ultimately influences the value-in-use derived through exchange, by enabling customers to access needed resources at the most convenient times and locations.**

## **THE INTERSECTION OF S-D LOGIC AND NETWORK THEORY**

When S-D logic and network theory are examined at the value-creation intersection, a pattern of similar viewpoints emerge. Both streams of thought argue that value is created through a complex system with multiple value-creating partners. S-D logic explains that market complexities increase the use of indirect exchange, which mask the fundamental exchange of service-for-service (FP2). Network theory identifies the market as a multifaceted, dynamic, interactive system which infinitely connects individuals and organizations of individuals. Network structures provide the vehicle for the continuous transfer of knowledge by emphasizing the importance of relationships and continuous interaction.

When general marketing practices are observed under a service-centered lens, the characteristics described about B2B networks become applicable to all of marketing, specifically in the process of value-creation. Similar to S-D logic's value co-creation, interaction within B2B networks is recognized as part of a dynamic, ongoing process where traditional roles of producer/consumer are unmasked and exchange is balanced. The three major characteristics highlighted by Ford et al. (2002) that inform S-D logic's value co-creation process are interaction, interdependent exchange and incompleteness.

The key issue when comparing S-D logic with network theory is to keep in mind that a network structure itself contributes to the masking of the fundamental service-for-service exchange. Although the network provides the infrastructure needed for dynamic relationships and the continuous transfer of operant resources, it cannot replace the value created when services are rendered. Table 2 compares the fundamental premises of S-D

logic, related to value-creation, with the characteristics of exchange within a network, emphasized by network theory.

**Table 2: Intersection of S-D logic and Network Theory**

Characteristics	S-D Logic Value Co-Creation	Network Theory Framework
Complex Interaction	Indirect exchange masks the fundamental unit of exchange (FP2) Service-centered view is customer oriented and relational (FP8)	Multifaceted relationships; boundary free structure; continuous interaction and transfer of knowledge
Interdependent Exchange	The customer is always a co-producer of value (FP6) The enterprise can only make value propositions (FP7)	Simultaneous involvement; cooperation and competition; 'prosumers'
Incomplete and Process Driven	The application of specialized skills and knowledge is the fundamental unit of exchange (FP1) Resource integration (FP9)	Incomplete resources; continuous connections; knowledge generation

S-D logic's concept of value co-creation goes beyond inviting the customer to participate in the production process. As mentioned above, value co-production is distinguished from value co-creation in that co-production involves the collaboration of customers and firms in the development and design stages of generating a market offering. On the other hand, value co-creation suggests that the customer is *always* a part of the value-creation process (FP6) and firms can only make value propositions (FP7) because value is ultimately determined by the customer. Network theory informs value co-creation by suggesting that value is not co-created within the dyad of the firm and the customer; rather co-creation involves the simultaneous involvement of a multitude of actors. S-D logic implies a non-dyadic relationship for creating value, but network theory helps to frame the processes among a group of actors, which includes cooperation, competition, integration and separation (Ford et al. 2002, p. 2). The interdependence found in a network reveals a balanced interdependence among network partners, where

all partners continuously and concurrently “produce” and “consume” in order to create value.

### **The Value Co-creation Crossroad**

S-D logic’s perspective of value co-creation recognizes that the foundation of exchange is derived from the application of knowledge and skills (FP1). Network theory acknowledges the incomplete nature of each network partner and helps to model the transfer of operant resources made through exchange. The process of exchange is generates new knowledge through the assimilation of various resources, which are contributed by multiple actors within the network. S-D logic explains that economic actors exist by integrating and transforming “microspecialized competences into complex services that are demanded in the marketplace” (FP9). Network theory supports this perspective and establishes a framework for the process of value co-creation. Through the network, an infinite number of resource combinations emerge. Each unique combination has the potential to generate new knowledge. The continuous generation of new ideas drives societal and economic evolution and change.

Observing the market as a network through a S-D logic lens exposes the multifaceted service-for-service basis of economic exchange and the unification of value-in-exchange and value-in-use into one process of value co-creation. This view refocuses the process of value creation from a firm’s production and units of output, to the ability to access, adapt and integrate operant resources. Within the value co-creation framework, exchange is conducted in order to render service (apply the knowledge of others) with the intention of bettering one’s circumstance through value-in-use. Value-in-use is

determined through the use of accumulated resources. When an operant resource is accessed and added to existing resources, it is adapted to fulfill a specific need and integrated into an assortment of resources. New operant resources and network connections are often generated through this process.

Research on customer value has exposed the heterogeneous and individual perspectives of value generated through use. Ultimately, value derived through exchange is comparative and relative and can only be determined with reference to something else (Holbrook 1999). With the process of value-creation focused on value-in-use, it is evident that the value derived from exchange is highly dependent on the applicability of available resources and knowledge in each actor's surrounding network. When value-in-use and surrounding networks are considered central to the process of value-creation, traditional models of a firm's value added activities focused on value-in-exchange appear, at best, incomplete.

The traditional focus on a firm's value-in-exchange, also neglects to adequately address the firm's value-in-use. Although internal activities are aligned for optimal efficiency in the value chain, the focal point remains on the monetary value a firm receives through value-in-exchange. Money itself does not provide the firm with real value; rather it gives the firm rights to access service when and where needed. The firm's monetary resources are used to access operant resources that enable the firm to provide service to customers, these resources include the knowledge and skills of stakeholders, including employees, stockholders, customers, and other firms. Value co-creation does not limit the understanding of value-in-use to the customer and focuses on the value-in-use for all economic actors involved in exchange.



Although it is possible for value-in-use to exist without value-in-exchange, exchange is needed to access the resources of others and co-create value. When the need for exchange arises, so to does the need for value-in-exchange. Value co-creation inherently requires the participation of more than one actor, and it is through the assimilation of available resources that value is created. While the division of labor creates efficiency in the production process, specialization leaves individual actors with a limited amount of knowledge and skill. The process of exchange requires value-in-exchange, as it represents the negotiated measurement for facilitating the exchange and provides access to immediate and/or delayed service.

Value-in-exchange is traditionally recognized as the price a person is willing to pay. However, the value co-creation perspective implies that value-in-exchange is offered and received by all parties of an exchange through proposed and/or monetary value. It is important to recognize the distinction of value-in-exchange from value-in-use because what is proposed through value-in-exchange is not necessarily a measure of the value derived through value-in-use. Therefore the value proposition or market offering is actually the customer's value-in-exchange that provides access to a firm's resources and potential service provision, it is a function of value-in-use. The use of operand resources (e.g., money and/or goods) as value-in-exchange provides each party the flexibility of accessing and applying operand resources when and where needed.

After centuries of deliberation, money continues to hold its place as the most frequently used nominal measurement for real value. Money itself, has been long been established for not having value on its own. However, it is the flexibility of transfer and agreement in measurement that has allowed such a medium to impact and establish the

global economy. The value derived from money as value-in-exchange, is found in its ability to provide people access to resources at the most convenient time and place. As discussed, time and place have been recognized as important value-creation criteria because access to a resource can be extremely valuable at certain times and locations and less valuable at others. Although it represents a nominal value, it is the liquidity of money that exposes its true value. It provides a convenient way to access resources, thereby increasing the density of the market.

In this sense, nominal or monetary form of value-in-exchange, like goods, can contribute to the value creation process by providing flexibility in the time and location of services rendered. However, like goods, money itself is a merely a vehicle for the transfer of service and cannot replace service application or value-in-use. As mentioned, when money is used for exchange, the benefit of time and location flexibility is rendered. When cash is rendered for a service offering, it can be held until the desired service is available or the time is appropriate to apply it. Similarly, credit allows people to render a desired service before providing the labor required to exchange for it. Normann's (2001) principle of density supports the necessity of value-in-exchange, which enables a network partner to select the time and location most appropriate to render the service desired. Thereby, the availability and function of value-in-exchange can increase the overall value-in-use and is a key function in the process of value co-creation.

### **Co-Creating Value in Systems of Service Exchange**

The traditional, unidirectional models of value-creation have been increasingly challenged by growing attention on the integrated role of the customer. Although S-D

logic is inherently customer-centric, value co-creation does not focus solely on the customer nor does it suggest that the customer is “always right”. This viewpoint would neglect to recognize the benefits the firm receives from an exchange. Value co-creation implies that the value created through exchange is based on the relationship among economic actors, and each actor (customer, firm, employee, etc.) makes a decision for whether the result of the exchange is valuable, through use.

Value co-creation is not limited to the activities of any one exchange. It occurs through the assimilation of old and new knowledge and is influenced by the context of the environment. This S-D logic/network theory view establishes a dynamic system of transferring, generating, and applying knowledge. Within the mindset of a service-for-service exchange, the force and conditions of exchange become clear. The force, or purpose, of exchange rests in each actor’s desire to better its own circumstance and/or to provide benefits for others, ultimately to create value. The conditions that create and resolve exchange lie in the availability of resources and configuration of the network.

The process of value co-creation inherently requires the active participation of two or more actors, thus the term “network partner” (NP) is used here to identify the interdependent nature of the economic actors in a system of exchange. These network partners include individual actors and organizations of individuals such as departments, firms, customer communities, families, government, states, nations etc. Each NP possesses a desirable knowledge and/or skill disbursed by the division of labor, and reconnected by a network of economic exchange. As discussed, emerging theories of value-creation suggest that the conventional separation of production and consumption between the firm and its customers is actually not as clear as it may have once seemed.

The model proposed below, Figure 1, illustrates the process of co-creating value at the point of exchange between a pair of network partners. This model is designed to reflect the exchange and value co-creation processes among all economic relationships. As discussed, the process of value co-creation is a continuous process; therefore it has no distinct beginning or end and involves a multitude of resources. However, it is helpful to temporarily reduce the scope of the network to aid in the understanding of the value co-creation process. The use of network pictures provides a narrow and limited perspective of a system of knowledge transfer. From the viewpoint of a single, a pair or group of actor(s), immediate relationships and exchange transactions can be observed and analyzed. Network pictures were introduced in the discussion of network theory and can be used to model portions of the network based on the perspective of one, or a group of, network partner(s).

**Figure 1. The Value Co-creation Process**

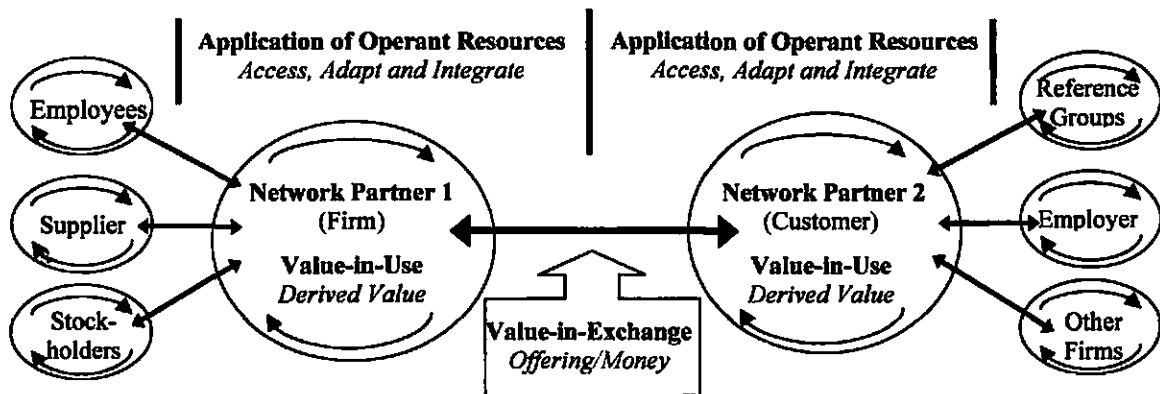


Figure 1 provides a network picture of exchange between NP1 and NP2, in this case a firm and a customer respectively. Each NP accesses the resources from one (or more) NP(s) through exchange. Value-in-exchange is the negotiated measurement offered and received (e.g., money and value proposition) among exchange partners. The resources of

the service provider are adapted and integrated with a NP's existing resources and value is derived and determined through use. The process continues as new knowledge is generated and exchange occurs within surrounding networks. These networks include, but are not limited to employees, employers, stockholders, reference groups and other firms.

### **Three Elements of Value Co-Creation**

The model presented above establishes three elements comprised in the process of value co-creation. Each NP simultaneously accesses, adapts and integrates resources through a dynamic system of service exchange. These three elements make up the process of value co-creation and influence the value derived from value-in-use. The elements of accessibility, adaptability and integratability of resources are briefly examined here.

When reading through the following section, it is important to keep in mind value that value co-creation emphasizes operant, rather than operand, resources (e.g., knowledge and skills).

It has been mentioned that much of the network theory research in marketing has been focused in the business-to-business arena. However, for the purpose of analysis and explanation, this section focuses on the business-to-customer relationship to provide an alternative viewpoint for examining network theory in marketing. In addition, although value derived through co-creation is largely experiential and influenced by emotion, affect and other more "irrational" customer responses, this investigation is limited to the observation of the systematic process and network configuration of value co-creation.

While the following examination does not completely ignore the experiential influence on value co-creation, they do not focus on it.

### ***Accessibility***

The accessibility of resources refers to how, where and when a service can be rendered and responds to questions such as: Are customers able to access the resource at a time/place and that is convenient to them? Do customers know about all the available resources to solve a particular problem? Do customers know where and how to access the resource? Are customers able to access the resources at a cost that is feasible? Does the cost of accessing the offering contribute to the service rendered?

The case of the automatic teller machine (ATM) provides an example of increased accessibility. Prior to the introduction of ATMs, in order to have access to cash, people waited in long lines during specific hours of operation to conduct monetary transactions at the bank. Today, ATMs are available 24 hours a day, 7 days a week, and located in nearly every major shopping area, as well as school campuses and convenience stores. Access to money has become even more ubiquitous with the introduction of debit and credit cards, which even provide access to money not yet earned. It has come to the point where it is almost unnecessary to carry cash, as almost all transactions can be made electronically. Ultimately, the increased accessibility of money has had a major influence on the dynamics of the market and dramatically increased access to other resources as well. Of course, in order for a person to utilize the accessibility of a resource, an offering must be made known. When a new service is made available, such as a new type of credit card or financial service, people must know about it in order to access it.

Advertising, direct mail, and public relations are a few tactics that are used in marketing to accomplish the task of awareness and likeability.

The cost of a resource, what a person has to sacrifice to access it, can also influence the accessibility of a resource in more ways than one. Often, low prices are associated with increased accessibility to resources. This is evident based on the idea that lower prices enable people to access more resources (e.g., the popularity of discount stores and clearance sales). The opportunity cost of accessing a particular resource is reduced when the price is low. Appropriately, at first glance it may seem as though high prices would then limit accessibility and in a sense it does. When prices are high, people have higher opportunity costs and are limited to the amount of resources they can access based on costs. However, high prices can also influence accessibility by providing access to feelings of exclusivity and status. Luxury offerings are often considered “luxuries” because of their high prices. When the same types of offerings (i.e., cars, cloths, houses) are made available at lesser costs, under different brands, they are often viewed without the same esteem as “luxury” offerings.

### ***Adaptability***

The adaptability of a resource is based upon the fit an accessible resource has in a NP’s existing assortment (Alderson 1957) of resources. This element answers questions such as: How does this resource complement or adapt to the resources customers currently have access to? How does this resource meet specific short- or long-term needs (i.e., clothing, shelter, food, entertainment, etc.)? Do customers have the knowledge and/or

skills needed to render the proposed value? Is the offering too complex (or simple) for customers needs and/or competence?

Although a resource may be accessible, in order to render service, it must also be adaptable to the actor's assortment of resources and competences. For example, if a person needs to include dairy, meat, and starch in his daily diet and has already eaten dairy and meat, starch will be the most adaptable resource to complete to this assortment. Additional access to dairy and meat will be overlooked that day because such resources are no longer required to "close" the individual's assortment (Alderson 1957) or, in this case, fulfill his daily dietary needs. Similarly, if a person is diabetic and requires a special diet for long-term survival, he will be careful not to eat sugary and fatty foods. Although they may be highly accessible, those types of foods are not adaptable to his existing circumstance.

Individual competence also plays a major role in the value co-created through exchange. As established, a firm cannot create and embed value into a good or offering, value can only be determined by the customer through use. Hence, co-created value is dependent on the existing knowledge and skills of the customer. The use of rapidly advancing technology provides a clear example of the importance of adaptability. While product innovations have increased the uses for many electronic devices (e.g., cell phones, computers, cars, etc.) if customers do not have adequate knowledge and skill to use the products, the "added value" or additional features will prove to be useless at best, if not an inconvenience. Related to this issue is the need for simplified offerings. While some customers may appreciate the ability to play music, take pictures and browse the internet with their cell phones, others only desire access to mobile communication. In



this case customers may be required to pay for features they do not want because they cannot be separated from the one they do.

### ***Integratability***

The integration of resources is the key to developing long-term relationships through exchange. While resources must first be accessible and adaptable, integratability addresses questions such as: How does this resource integrate into different areas of customers' lives and contribute to their self-concept? How does this resource help customers integrate with their social environment and connect them with surrounding networks? How does this resource influence others' perceptions of customers? Can customers share access to this resource with others? Can customers talk about this resource with others to make social connections and help solve the problems of others? What kind of new knowledge can be generated and transferred from the integration of this resource?

Once a resource is accessible and adaptable it is often in danger of being considered a commodity. As seen in today's economy, ATMs, food and cell phones can be replicated and distributed throughout the market. Resource providers can easily establish offerings to fit into the daily lives of individuals, however, it is the integration of resources that often differentiates one resource from another. As discussed, an individual's competence plays a major role in value co-creation, perhaps more importantly, so too does a person's self-concept and identity. If a woman takes pride in her position in the workforce, she will likely dress in a manner that makes her feel like a working woman. Alternatively, if a woman defines herself as a homemaker, she is likely

to dress in a manner that better represents her self-identity. Using external resources to support and validate internal beliefs is deeply rooted in religion, culture and social norms. For example, Muslims use their diet of “Halal” food, restricted from pork, alcohol and other foods, to not only validate their self-identity as a Muslim, but also to connect to other Muslims who share the same beliefs.

Integratability also establishes social connections that may not be as deeply rooted as religion, but equally influential. Hand-soap, for example, can be considered a commodity offering based on its broad range of accessibility and adaptability in cleaning hands. However, there are many companies that have been able to integrate their soap “products” into social networks including families and friends. The design of the soap bottle, the scent, the color and the brand are often used for display and provide decorative accents in bathrooms and kitchens for others to see and comment on. The use of the soap itself is not limited to one person and can be used by family, friends and other guests. It can be even given as gifts and talked about in a social setting. Once a brand of soap is integrated in a customer’s life, that person is likely to share the benefits of that resource with others, through word-of-mouth or gift giving, to help provide solutions for the needs of others.

### **Seven Research Propositions for Value Co-Creation**

The model proposed above and its comprised elements of accessibility, adaptability, and integratability provide a framework for the process of value co-creation and establish seven research propositions. These propositions are derived from the intersection of S-D logic and network theory in that they focus on the exchange of operant resources within a

complex and dynamic system or market. This service system of perspective provides important insights on the processes and outcomes of value co-creation. Although framed here in a B2C context, the following propositions are fundamental in that they can be applied to all types of exchange.

***Proposition 1: Value co-creation occurs through the integration of multiple resources within a network of service providers and recipients.***

It is easy to confuse the concept of value co-creation with that of value co-production. In fact, this is often the case. While this distinction has already been addressed above, it is worth noting here. Although customers may be reluctant to participate in the co-production of a firm's offering, by contributing to the design and development of a service, they cannot escape the co-creation process when deriving and determining value through use. As established above, value-in-use is ultimately determined through the integration of newly accessed operand (and sometimes operant) resources with an existing assortment of resources and competences.

Dell Inc. is a well known example of value co-production. The company invites customers to participate in the "production" process of an offering by selecting specific features and components such as screen size, memory space, speed, etc. In this sense, the customer participates in the production process of the offering. While value co-production contributes to value-in-use, it does not complete the process of access, adaptation and integration. The process of value co-creation continues what may or may not have begun with co-production and integrates the newly accessed resource with an assortment of resources, including knowledge and skills. Two customers may purchase

identical computers but based on their existing resources, knowledge and skills have very different patterns of use. For example, if both customers purchase, perhaps even “design”, the same laptop but one is a student and the other is a business person, they will each use the computer differently. The student may use the laptop as his main access to computing service (e.g., writing papers, developing presentations, graphic design, etc.), while the business person may limit his use of the laptop for traveling and conducting business outside the office. The value derived through co-creation is heterogeneous and dependent on an individual’s circumstance and existing access to resources.

***Proposition 2: Value co-creation implies self-customization.***

Following up on Proposition 1 and the idea that all value derived through co-creation is heterogeneous, value co-creation inherently implies self-customization. Customization occurs through the customer’s integration of resources rather than in the firm’s production and packaging processes. Self-customization differs from business models of mass customization (e.g., Dell), which invites customers to co-produce customized offerings. Self-customization is inherent in value co-creation and occurs through the adaptation and integration of a variety of resources, through a dynamic network of service providers. This type of customization can be seen from the outfits people wear and the way a room is decorated, to a person’s bookmarks of favorite web pages.

Every assortment of resources is unique (Alderson 1957). Individuals adapt and integrate resources to self-customize their lives. Self-concepts and social influences aid the process of self-customization. Returning the example of a woman who takes pride in her professional career, she may self-customize her wardrobe by shopping in a variety of

business-like apparel and accessory stores, such as Ann Taylor, Banana Republic and Coach. She may further customize her life by driving what she believes to be a success-defining car such as Mercedes or Lexus, as well as living in an area where many of her colleagues live and spending time in restaurants where she feels comfortable networking and socializing. Her efforts to self-customize strongly influence the value co-creation process when attempting to adapt and integrate a new resource into her assortment. If the newly accessed resource does not fit or integrate well with existing resources and knowledge, it is likely that the derived value-in-use will be minimal.

***Proposition 3: Value-in-exchange is not limited to the price a person is willing to pay and is not necessarily an accurate measure of value-in-use.***

Although value-in-exchange is most often thought of as the price a person is willing to pay, this is not necessarily the case. As has been discussed, the deliberation of a commensurable measurement for exchange value, dated back to Aristotle, was never really resolved. While value-in-exchange for the firm remains primarily monetary, barter maintains its position as a valid form of exchange. Moreover, in the process of value co-creation, value-in-exchange must also be considered from the viewpoint of the customer. It has been established that, from a S-D logic perspective, the firm cannot create value; it can only make value propositions. It is ultimately the customer that derives and determines value through use. When a customer exchanges a firm's requested value-in-exchange, usually money, for a value proposition, the proposition serves as the customer's value-in-exchange. The customer's initial perception of the service received may or may not be an accurate measure of its value-in-use. In fact, the value derived

through use often differs from value-in-exchange, once adapted and integrated with the customer's existing assortment of competences and resources.

A good example of the difference between a customer's value-in-exchange and value-in-use can be found in the plethora of diet and low-fat foods in the market today. Often times when a person eats low- or no-fat foods he is expecting that this will help him to lose weight. However, his perception of value may not be derived through value-in-use if he does not limit his overall caloric intake (e.g., if he overeats low-fat foods) and if he does not burn more calories than he consumes. In this case, due to his limited competence, the customer will not derive the original perceived value in exchange and his value-in-use will be minimized.

***Proposition 4: A firm's requested value-in-exchange, usually price, can influence the application of resources and is driven by value-in-use.***

Although value co-creation is driven by value-in-use, S-D logic also recognizes the importance and necessity of value-in-exchange. The value-in-exchange requested by a firm, usually price, plays a major role in the accessibility, and ultimately the adaptability and integratability, of resources for customers. When a firm's value-in-exchange is low (e.g., prices are inexpensive) people are able to access more resources. Since value co-creation is based on the collective assortment of resources, enabling a person to access more resources potentially increases his overall value-in-use. Although high prices may in some instances limit accessibility of resources, at the same time when value-in-exchange is high, accessibility to resources such as exclusivity and luxury are then made available. In either case, the value-in-exchange enables customers to access, and

potentially adapt and integrate, a variety of resources to meet different of needs and wants.

Wal-Mart has been able to capitalize on the “low-cost means more access” phenomenon by offering a plethora of low priced goods in one location. In this case although, the time/place components of accessibility may be limited, the accessibility to resources through price allows more people to access resources that they may not be able to at higher prices. On the other hand, although it may seem counterintuitive, high prices can also increase access to resources. Nike does not just sell running shoes; the company, or more appropriately, brand, contributes to the lifestyle, self-concept, and social connectivity of its customers. Thus, the high value-in-exchange required to access such resources ultimately helps in the co-creation of the value derived through exchange.

***Proposition 5: A firm’s aggregate value-in-exchange provides a feedback measurement for the collective value-in-use derived from the service provided.***

S-D logic suggests that value-in-exchange can be used to gauge feedback from the market (Vargo and Lusch 2006). However, the value-in-exchange that measures feedback is not found in individual willingness to pay a certain price; rather it is the aggregate inflow of value-in-exchange, provided by a network of customers, that can help firms in monitoring the value derived through co-creation in the market. Returning to the example of Wal-Mart and its low price policy, it is well known that Wal-Mart is one of the most financially successful companies in the country, if not the world. However, it is not due to a high value-in-exchange received from individual customers that reveals Wal-Mart’s contribution to value co-created in the market. It is from the continuous and,

more importantly, collective value-in-exchange received from the massive market that Wal-Mart serves that indicates the company's contribution to value co-creation in the lives of many.

This is not to say that high prices do not indicate a high aggregate of value-in-exchange or value-in-use. Alternatively, in many cases, higher prices provide greater profit margins and actually indicate higher levels of adaptability and integratability. Branding can be used to differentiate commodity-like offerings and demand higher prices due to their contribution toward increased value-in-use. Nike has been largely successful due to the adaptable and integratable resources it provides. Although the company does not manufacture its offerings, it has been able to differentiate its brand by relying on innovative designs and celebrity endorsements. These aspects help people in adapting a shoe into their assortment of resources and integrating it into other areas of their lives including self-concept and social connectivity. Overall, the company has remained financially successful, evidenced by its aggregate value-in-exchange, in part due to large profit margins, but largely due to brand popularity.

***Proposition 6: Value-in-use is derived from all three elements (accessibility, adaptability, and integratability) of value co-creation.***

As illustrated in the proposed model, value derived through use is dependent upon the application, or more specifically, the accessibility, adaptability and integratability, of an assortment of operant resources within a system of service exchange. While propositions 1-5 emphasize various elements of the process of value co-creation, in determining value-in-use all three elements are considered in a sort of cycle of events. A resource must be



accessible before it can be adaptable, and must be adaptable before it can be integratable. However, once a resource is deemed integratable, it can actually increase accessibility by enabling the sharing and transfer of resources as well as generation of new operant resources. Thus, while access and adaptability are critical elements of value co-creation, integratability establishes the strongest link in a system of service exchange and continues the process of knowledge transfer and generation.

The Apple iPod provides an example of how integratability can propel the continuous co-creation of value through a network of resource integrators. As a mobile device for playing music, the iPod does not differ significantly from other MP3 players. It provides access to music, which is adaptable to the tastes and preferences of the customer. However, this is where the similarities end. Since its inception, the iPod has become an icon for popular American culture. It has been deeply integrated into the lives of individuals and woven through various aspects of society from classrooms to avenues of communication.

While some of the iPod's integration has been done through brand extensions (e.g., different types of iPods and iPod accessories) and brand collaborations (e.g., partnerships with VW, Bose, Nike), much of iPod's integratability stems from the strength of the brand itself. What began with high accessibility (e.g., access to music any time and place) and high adaptability (e.g., ease-of-use), the iPod has become highly integratable in various areas of a person's life (i.e., education, exercise, driving, etc.). The iPod also helps customers integrate with their surrounding network, by providing social connectivity through recognition of the offering as well as sharing of music and video files. iPod's successes aside, integratability does not necessarily mean more is

always better. Most recently, iPod has included mobile phone communications. While this latest feature may contribute to the accessibility of an additional resource, by adding the use of phone services, it is yet to be determined if it will greatly increase the adaptability and integratability of the iPod.

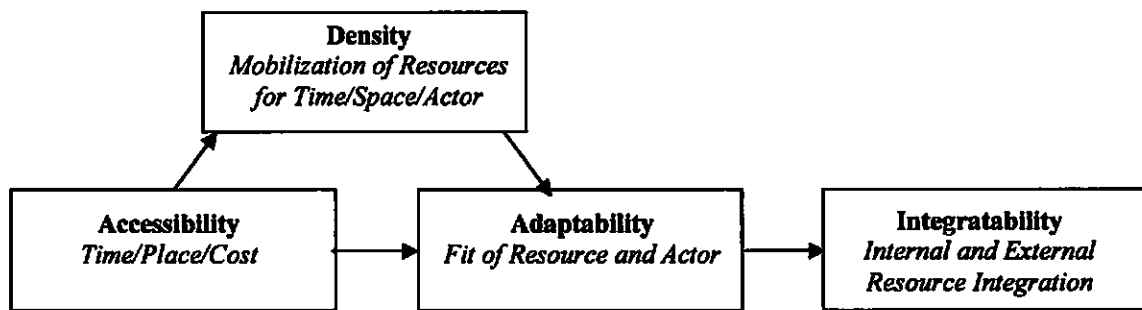
***Proposition 7: The configuration of the network is a moderator of value co-creation.***

It is clear that value is co-created by the application of operant resources (e.g., knowledge and skills), not the network itself. However, the shape and dynamics of the network can influence the sharing of knowledge and act as a moderator of value for individuals and groups of individuals throughout the network. Because existing competences, environments and resource assortments differ for each individual, the value determined through use is heterogeneous in nature. Thus, co-created value depends highly on the quality of each NP's surrounding network. Marketing's role is to facilitate the exchange of knowledge among all economic actors (e.g., within a firm, between firms, between firms and customers, between firms and shareholders, and between customers and reference groups). In order for satisfaction to occur, each party must feel as though they gained something more valuable than what was given in the exchange.

The model presented above (Figure 1) reflects the framework of value co-creation that emerges at the S-D logic and network theory at the crossroad of value-creation. It focuses on the exchange of operant resources through an integrated, dynamic and multifaceted system of service-for-service exchange. The root of exchange, service, is exposed and the interdependent nature of each network partner is emphasized. By removing unidirectional patterns the model refrains from distinguishing the roles of

producer and consumer and each actor in the network is considered a knowledge provider and resource integrator. The value co-created in exchange is unique to each actor and dependent on the conditions of its surrounding network. The condition of a service system is influenced by its configuration and ability to provide operant resources when and where needed, meeting time/space/actor specifications. Figure 2 depicts how the configuration of the network can act as a moderater in the process of value co-creation.

**Figure 2. System Configuration Influence on the Process of Value Co-Creation**



From the broadened framework of value co-creation it becomes obvious that exchange is not a dyadic encounter; rather it is a continuous process that provides access to service within a system of interdependent actors. The value co-created in a service system is dependent on the configuration and interaction within the system itself. It was a mentioned that the reconfiguration of the system, and bundling and unbundling service, addresses time and space constraints for actors. In a sense, increasing density, and making resources more accessible within a system, ‘creates’ time, by freeing up time for other activities to be done.

When density is applied to a system’s configuration the connection between accessibility and adaptability of resources is likely to strengthen. Ideally, all actors within the system will have access to all the knowledge and specialization needed at any

given place and time. The concept of density is readily occurring with communication technologies (e.g., Internet, cellular phones, and global position systems). In fact, as mentioned it is likely that recent advances in technology and the rapid transfer of information is largely responsible for the drawing increasing attention toward the market as a network and systems of exchange, and the importance of understanding value-in-use.

In the case of the iPod, density has helped transform a mobile device for playing music to a cultural phenomenon. The iPod stretches the traditional boundaries of an MP3 player and provides access to a multitude of digital media, including “pod casting” and file sharing. A variety of sizes are offered to meet different needs from running to traveling. By enabling customers to rebundle, and self-customize, their access to music and other media, the iPod connects to stereo systems, cars, and even shoes (i.e., Nike). Apple’s ability to increase the density of what was originally an MP3 player, making stronger connections for time/place/actor accessibility has greatly contributed to the adaptability and ultimately integratability of the iPod.

Innovative configurations of systems of service exchange, driven by value-in-use, support the competitive advantages proposed by Normann (2001). The infinite extent of value co-creation, with the basis of service-for-service exchange, can only be modeled through the perspective of network pictures. The network picture presented in Figure 1 reflects the mobilization of resources and the configuration of market activities that enable the co-creation of value among a group of network partners. As seen in Figure 2, the value derived in a system of service exchange increases with the connection between the accessibility and adaptability of resources, ultimately influencing the speed and fit at which resources are accessed and adapted throughout the network. The process of value

co-creation continues through integration and creates a continual process that generates new knowledge and skills, which are further transferred and built upon throughout the network, driving economic and social evolution. This is the process of value co-creation and the resonance of economic exchange.

## IMPLICATIONS

“The paradox of the twenty-first-century” suggests that customers have more choices, yet seem to be less satisfied (Prahalad and Ramaswamy 2004). While there are strategic options available to managers, they all seem to yield less value. The increasing complexities of the business environment have been the center of managerial debate in recent years. Practitioners and academics have discussed business alliances and collaborative efforts in creating value, and have recently begun to consider the competences of the customer as a resource for value-creation. The most basic shift in the relationship between the firm and the customer has been the changing role of the customer (Prahalad and Ramaswamy 2004). With increasing access to information, customers have many more options and can evaluate value propositions more critically. The geographical limitations on customers are disappearing and firms are being forced to adapt to a more integrated global environment. The pervasiveness of advancing technologies, such as mobile phones and the World Wide Web, is increasing the openness of dialogue among individual consumers, and customer communities are gaining attention.

Prahalad and Ramaswamy (2004, p. 4) suggest that the changing role of the customer means that “companies can no longer act autonomously, designing products, developing production processes, crafting marketing messages, and controlling sales channels with little or no interference from consumers...armed with new tools and dissatisfied with available choices, consumers want to interact with firms and thereby co-create value.” The authors recognize two fundamental challenges faced by traditional marketing assumptions when the active involvement of customers is considered: 1) Can a

company or industry create value unilaterally? 2) Does value reside exclusively in the service provided by one company or industry?

At the crossroad of S-D logic and network theory, neither the firm nor the customer plays a central role in the process of value creation by itself. The focus of value co-creation remains in the integration of resources and the value derived depends on the perspective of each actor. The knowledge generated by one exchange will inevitably pass on through future exchange with multiple actors. Because of the infinite number of connections throughout the network, the creation of value never ceases. Like a network, the process of value co-creation has no definite beginning or end. Understanding the value co-creation process under this pretense becomes complicated at best.

The model of value co-creation presented here fundamentally shifts the underlying focus of value-creation away from a firm's output. It suggests that all economic actors simultaneously access, adapt and integrate resources and that knowledge is the core source of all exchange. Exchange is done in order to render services or apply the knowledge of others with the intention of bettering one's circumstance. In each exchange all participating parties give up something of value for something expected to be of greater value. It is the application of operant resources which uniquely benefits each actor and allows the generation of new knowledge. This viewpoint of continuous knowledge transfer and application, throughout an infinite web of production and consumption, has many implications for the study and practice of marketing. A deeper understanding of value co-creation can potentially influence the scope and responsibilities of marketing, strategic initiatives of the firm, attitudes toward innovation and globalization, and ultimately the evolution of society.

The study of marketing is currently in a state of transition. As reviewed in the literature above, over the past few decades many theories have emerged contradicting traditional firm focused models of value-creation. Attention toward customers is at an all time high and marketing itself is receiving more attention by the firm. The study of marketing is broadening its resource pool to include a wide array of social sciences and even begins to explore natural sciences (Gummesson 2006). Both service marketing and network theory have aided in the movement away from traditional marketing research held under the G-D logic.

While research on value co-creation remains in its beginning stages, the general model presented, and its comprise elements, provides an abstract conceptualization of the transfer of operant resources and the potential of value-creation within a network.

According to Gummesson (2006 p. 343),

The underlying assumption is that theory on a higher level of abstraction is helpful in research, education and practice (Gummesson 2004a). However, grand theory can only be relevant and helpful if it emerges out of substantive detail. Therefore, ongoing interactions between grounded data and abstract thinking are a symbiotic process. The whole is not the sum of more and more details; it is synergetic integration.

S-D logic's concept of value co-creation provides an overarching mindset for how value is created. Close attention should be paid to this logic as it addresses many deficiencies of the traditional G-D logic that have been pointed out by numerous scholars in recent years. Network theory helps to ground this logic and appears to provide the most optimal pattern for studying the complexities of the market and marketing. Networks should be observed and analyzed through the S-D logic lens in order to better understand of the dynamic realities of market exchange.



With marketing at the forefront of economic exchange, businesses must recognize that the function of marketing cannot be kept in a silo. Marketing must be treated as a function of the firm and the responsibility of each employee. Because shared knowledge is the key factor in value-creation, employees must strive for the continuous transfer of knowledge within the firm as well as with customers. No department can remain isolated, as competitive advantage and success depends on the incessant transfer of knowledge among networks. These networks extend beyond a firm's borders and the transfer of knowledge must be shared with other partner firms. In this case firms must cooperate and compete simultaneously. Because each firm has a different resource configuration, the new knowledge generated from each firm will remain unique. This enables the sharing of knowledge to take place while firms remain innovative and competitive.

Within the process of value co-creation, the responsibilities of marketing practitioners increase tenfold. The role of marketing is often considered to be the facilitation of exchange. In the market, network connections are not unidirectional or dyadic and marketers must take on the role of negotiators of exchange. Two-way dialogue (Ballantyne and Varey 2006) plays a critical role in the communication among firms and customers. In the process of value co-creation, a firm's marketing department must guide internal communications and knowledge exchange. The core competency of any firm is held within the knowledge of its employees. Encouraging shared knowledge within a firm will increase the competency of the firm as a whole and strengthen its competitive advantage.

The relationship between a firm and its customer drastically changes under the framework of value co-creation. A firm's strategic approach to marketing "with", rather than "to", a customer should consider the customer's position in the market network. As portrayed in Figure 2 the configuration of a customer's surrounding service system moderates its accessibility and adaptability, thereby influencing integrability and ultimately, value-in-use. Firms must pay attention to the configuration of such systems and reconfigure themselves to increase system density, the accessibility of resources based on time and location. Rather than providing customized offerings, firms should encourage customers to utilize surrounding resources and customize their own offerings. While this increases the responsibility of the customer, it also encourages the customer to engage in the value-creation process as an active, rather than passive participant. To encourage such customization, the firm should provide access to unbundled resources, and allow customers to rebundle them, adding efficiency in the process of value co-creation.

In value co-creation, the customer is understood to be a part of the value-creation process and is relied upon to continue the value-creation process, through use of a firm's offering. Because a customer's competency is heavily influenced by his/her surroundings, a firm must be keenly aware of the customers' sources of knowledge, which includes friends, family, and other reference groups or affiliations. Rather than increasing "value adding" activities within a firm or adding external attributes to a value offering; a firm must focus on the competence of the customer. The more knowledgeable a customer is about any particular offering, the likelihood of value co-creation increases. If the customer does not have the competency to use a value offering as it is intended to

be used, it is likely the customer will remain unsatisfied, regardless of how many value added attributes are available. By focusing attention on customers through reference groups, families, friends, and other affiliations, firms can help customers understand their responsibilities as co-creators of value.

Accepting this perspective of customer responsibility in the value-creation process will require firms to shift strategies and reallocate their efforts in the marketing and communications process. Rather than focusing on unidirectional communications, from the firm to the customer, firms should consider other influences on the customer's knowledge and the accessibility, adaptability and integratability of resources. The discussion of value-in-exchange continues to raise issues of measuring customer value. The traditional way of determining value in the market is done through a firm's pricing strategy, often based on the economic laws of supply and demand. This strategy is grounded in a goods-centered logic where the firm creates and determines value and then sells it to the customer. With the emergence of the service-centered perspective, comes the recognition that traditional pricing structures may also be flawed. If a firm accepts that value is co-created through exchange, it must acknowledge that the measurement for that value cannot be determined by the firm. Value-in-exchange, or price, must be negotiated from a different perspective, one that focuses on value-in-use. Dialogue remains is a key factor in this communication and customer feedback to the firm becomes a critical guide for future communications and value propositions.

When the scope of the network is expanded globally, the pattern of value co-creation remains the same. Just as firms must work with other firms and stakeholders in order to create value locally, they must do so across national borders. Outsourcing has

replaced operational divisions, especially manufacturing and technology, in countless firms, large and small. The exchange of overseas labor has further specialized not only individuals and organizations, but nations as well. In the global community it is becoming increasingly clear that one nation cannot stand alone. While the division of labor has created national specialization, it has also created national interdependence. This is a difficult, if not impossible transition to reverse. Once the networks have been connected, disconnection can lead to catastrophic results. At this point national leaders must focus on the best way to integrate the world's resources without jeopardizing the well-being of any one nation.

As with the transfer of knowledge and skill among individuals and organizations, it would be wise for such exchange to occur among nations. For good reason, the national exchange of knowledge comes with reservations about protection and safety. However, in order for the global community to prosper and for knowledge generation to continue, exchange must take place. As it stands, the exchange or trade between nations focuses largely on operand resources and the GDP remains a significant measure of national wealth. Exports and imports are the focus of a goods-driven market and tariffs and trade agreements create obstacles for the transfer of resources among countries. Another major reservation for the increase of globalization or international mobilization of resources is the effect that connecting networks have on national culture. Many countries wish to preserve their traditions, values and beliefs, but they do so at the cost of restricting national citizens from access to an abundance of resources.

## **DIRECTIONS FOR FUTURE RESEARCH**

The discussion of value co-creation is just beginning. As Gummesson (2006) suggested, to establish a theory of value co-creation this abstract concept must be grounded in specific and analytical data. S-D logic has opened a door for discussion and debate over the transition of marketing and the direction in which it is heading. The S-D logic view of value co-creation builds on ideas from various scholars and lays the groundwork for exploration. The proposed model, and its comprised elements, establishes a general framework for the analysis of market interactions. While it is impossible to view the effects of the entire network at any one time, an abstract understanding of value co-creation is needed to establish a framework for specific phenomena to be studied. The examination of networks within micro- and macro-contexts, and from various positions among different actors, will reveal specific patterns and generalizations of exchange. Further research, based on the seven fundamental propositions presented, will deepen the understanding of various exchange perspectives and may eventually lead to the emergence of normative ideas and a consensus of 'best practices.'

It has been established that the roles of the firm and its contribution to value-creation differ drastically under the scope of value co-creation. These roles and departmental functions should be more closely examined to better understand the integrated process within a firm that contributes to the overall value co-creating process. Network organizations have been studied in existing literature and structural models for optimizing network positions have been explained. However, many of these models continue to separate the production and consumption functions as well as delineate the

firms from the customers. Much can be gained from the reexamination of such models, and the strategic initiatives of the firm based on the seven research propositions proposed.

While it is important to examine a firm's internal interaction, value co-creation extends far beyond the network of any individual actor. Therefore, it is equally critical to understand the unique relationships among different types of network partners. As mentioned, there has been a substantial amount of research devoted to the understanding of business networks and the interaction among business partners. Similarly, relationships among other types of network partners should be examined such as, shareholders/firm, family/customer, friends/customer, employer/customer, firm/customer, nonprofit/customer, gov/customer etc. to understand how these relationships and the resources they provide create or influence economic exchange. In particular special relationships such as government and non-profits should be paid attention to, as we have seen in the case with services marketing and business-to-business marketing, when special cases are explored, major implications can be made for marketing in general. Although the propositions were presented within a firm/customer context, they can be used to examine all types of exchange relationships.

One area that has not been discussed here, but referred to by both S-D logic and network theory is the relationship among humans and their environment. According to Bastiat (1860 p. 69), the division of labor is necessary because "the resources of nature are unequally distributed over the earth". However, he also suggests that "the better man exploits the forces of nature, the better he provides himself with all he needs." This means that although an actor is limited in resources and requires exchange, he should also consider environmental factors as resources and optimize their use. The examination of

market networks must be considered within the context of its environment. The market is embedded within society and influenced by many environmental factors that must be considered and analyzed along with social and economic interaction.

S-D logic suggests that what are often thought to be uncontrollable external factors, such as the legal, social, technological and even natural environment, “have the potential to be resources if certain resistances can be overcome” (Lusch and Vargo 2006, p.414). Gummesson (2006, p. 350) expresses that “the need for balance between the roles of technology and human beings has perhaps never been more acute than today.” The gathering of resources does not always come from the exchange among actors, and those accessed from the infrastructure and surrounding environment must also be considered in the process of value-creation.

As discussed, effectiveness of value co-creation depends highly on amount of knowledge and the speed at which information travels within a given system. Empirical research on the seven propositions is needed to better understand exchange patterns and market interaction as well as the process and outcomes of value co-creation. Such observations will help to explore patterns of knowledge transfer and the potential of new knowledge generation. System density becomes a key concept in the mobilization and integration of resources and needs to be closely examined for strategic implications. Elements that aid the mobility of transferring resources include advancing communication technologies (i.e. internet, cellular phones), nominal or monetary exchange (i.e. cash, credit) and the network itself.

According to Normann’s (2001) principle of density and his concept of Prime Movers, the more density a firm establishes within a system, the more mobilized its

customers are in the time and place of interaction with the firm. However, these concepts raise many questions about systems of service exchange, including issues relating to challenges of network relationships, strategies for increasing density, and the optimizing the size and concentration of a system. It is evident that there is much research to be done to increase the understanding of value co-creation. The advancement of network research under a S-D logic lens will aid in addressing these issues.



## CONCLUSION

The potential of value-creation throughout the market is infinite. The S-D logic of marketing presents a viewpoint for the continuous transfer, generation, and application of knowledge. From this perspective, the creation of value is not confined to the production processes of a firm; rather it is determined through value-in-use. A service-centered view of the market exposes the inadequacies of the traditional, goods-centered mindset and reveals a market based on service-for-service exchange. Network theory supports this understanding of exchange by emphasizing the interdependence of actors and providing a continuous medium for the flow of service.

The intersection of S-D logic and network theory literature has established a framework for modeling value co-creation. At this synergetic crossroad, the co-creation of value is complex, interdependent and process driven. Value co-creation is recognized as the underlying mechanism for value creation, based on the necessity of exchange. The examination of exchange is broadened from its traditional linear and dyadic framework and inspected within the context of the market. In a network, the exchange of service and the creation of value are continuous and knowledge is ever increasing. The scope of the network is endless and its structure is always changing. Network pictures are used for examining specific phenomena among systems of service exchange on micro- and macro-levels and from different network positions. The model of value co-creation identifies an “abstract level of conceptualization” but requires “specific data and concrete description” before a theory of value co-creation can be touted (Gummesson 2006).

There is much to discover about value co-creation and the endless process of transferring operant resources throughout a network. The seven research propositions

provide a starting point for the closer examination of the co-creation of value. It is increasingly evident that the roles of producer and consumer are unclear and value-creation should be considered to be the responsibility of all actors engaged in exchange. The process of exchange is embedded with social and economic qualities, often providing both utilitarian and symbolic benefits. Value-in-exchange is no longer the final measure of value, but becomes a necessary function in the process of creating value-in-use, and value-in-use is seen as the focal point of value co-creation and requires the adaptation and integration of resources accessed through a network of exchange. Thus, value exists in the mind of the resource integrator and is not usually equal to value perceived by another. Value derived from an offering is heterogeneous in nature and customized by the customer based on his existing knowledge and access to other resources. The quality of an actor's surrounding network, or system of service exchange, is directly related to the value that is created.

The configuration of service systems determines the time and place accessibility of operant resources, which in turn influences the value-in-use derived through exchange. The concept of density, discussed by Normann (2001) measures the accessibility and adaptability of operant resources that an economic actor has access to at any given time and place. Normann argues that the major competitive advantage for a firm is found in its ability to reconfigure access to its resources by 'unbundling' and 'rebundling' market offerings. This process inherently focuses on value-in-use and the future potential of value-creation as well as the present. Embracing the interdependent process of value co-creation is necessary for understanding the influence of system configuration and its impact on accessing, assimilating, applying and sharing resources throughout the market.

While the implications of value co-creation are evident in today's complex market economy, extended research and empirical studies regarding processes and structures of service systems are required for grounding these general models. It is unlikely a definitive answer will be available to explain all of economic exchange. However, just as the process of value co-creation drives innovation and the evolution of the market, it enables academic knowledge to progress and advance. Like the process of creating value, the understanding of value co-creation will only arise from the combined effort of multiple actors, cooperating and competing to propel continuous transfer and generation of knowledge.

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