Service science, S-D logic and network theory.
Integrating the perspectives for a new research agenda.

It was in a rainy November afternoon, in Stockholm, in 2007 that the idea started to sparkle in our minds. The after lunch discussion was vivid but its focus was not clear; it happens sometimes when you have the chance of letting the flows of ideas free in order to reach a new starting point. The discussion was about marketing theory, rapidly followed by management, in which discipline advances needed new approaches, new grand theories, renewed paradigms (Gummesson, 2002; Ghoshal, 2005). Intriguing issues such as complexity, system thinking, human behavior, competitiveness, and service systems were addressed, still we were not able to see clearly what was missing. Cultural and behavioral change of customers, globalization of systems and competition, information and communication technology with the Internet and web service, and other changes – all require new marketing and management theory. New approaches to marketing have been brewing for the past three decades challenging the 1960s marketing management and marketing mix (Mele, 2007). These include service marketing and management, relationship marketing and CRM (Customer Relationship Management), and relational and network applications in B2B (business-to-business) marketing. We are left with a fragmented and confusing view. The discipline has reached a turning point calling for more systemic and integrative theory.

Service-Dominant (S-D) Logic and Service Science contributed a synthesis of much that had been developed during the past decades in Northern Europe, UK, France and the US; still there was something missing. And then, far from solving the problem, long distance discussions between Stockholm, Cassino and Naples gave rise to the idea that research and discussion had to address these topics jointly. They needed support from theory that addresses complexity. Network theory and more specifically Many-to-Many Marketing and the Viable System Approach do just that.

Why connecting the themes? The themes are interdependent, integrative one to each other. S-D logic dissolves the divides between goods/services and supplier/customer into co-created service and value. It forms a philosophy for the service science project and its applications in education, theory, and practice in its effort to create hassle-free, innovative service systems. Network theory is a systemic way of thinking and a methodology to go beyond fragmented research in marketing addressing complexity and context with direct application on service systems. The three themes of the 2009 Naples Forum on Service– currently catching the imagination of scholars and practitioners worldwide – represent efforts in that direction.

Service Dominant Logic (S-D Logic, Vargo and Lusch, 2004; 2006; 2008) is a theoretical proposal of marketing discipline that highlights a paradigm shift from goods dominant logic to service dominant logic; following foundations of networked relationships, new value co-creation processes, business interactions, resources integration, the authors attempt a new interpretation in market discipline introducing the dominance of service over products and goods, thus trying to follow an approach considered more faithful and adherent to nowadays competitive context (Rust, 2004) of our Service Economy (Levitt, 1981; Normann, 1997). S-D logic presents its message through ten foundational premises. In brief, these premises put the following to the fore. Service is the fundamental basis of exchange. Note that it is "service" and not "services" as opposed to goods; goods are merely distribution mechanisms of service. Operant resources are those which do something to something. Both businesses and customers are operant resources meaning that they both act as opposed to the mainstream marketing idea that suppliers do things to customers who just react. The customer is always a co-creator of value. A supplier can only offer a value proposition on the market; the value actualization is performed by users in an idiosyncratic and contextual way. The network aspect is implicit through the statement that all social and economic actors are resource integrators, implying that value creation takes place through interaction in complex networks. S-D logic is based on international findings and openness to continuous improvements and creative developments. According to this view "the goods are no longer the only transaction objects, but they appear as an appliance for services provision. Service is seen as the real protagonist of interactions and transactions". Service no longer represents a part of an asset or the intangible side of an output product. It "is the service to be really exchanged" (Vargo and Lusch, 2006).

Service Science, Management, and Engineering (SSME), usually just referred to as Service Science, is a global development program run by IBM together with universities (Maglio, Spohrer, 2008a; 2008b; Maglio, Srinivasan, Kreulen, Spohrer, 2006). It is a call for academia, industry, and governments to become more systematic about service performance and innovation. Further, it is a proposed academic discipline and research area that would complement – rather than replace – the many disciplines that contribute to knowledge about service. Its philosophy is in line with S-D logic. The ultimate goal of service science is to apply scientific knowledge on the design and improvements of service systems for business and societal purposes (such as efficiency, effectiveness and sustainability). The concern is that we do not master seamless and reliable service systems at a time when systems are becoming increasingly complex and global, making us increasingly vulnerable to systems sluggishness and failure. Every service system is both a provider and client of service that is connected by value propositions in value chains, value networks, or value-creating systems. Read more on service science on Google but stick to entries from the past six months; the program is developing fast and older entries may be misleading. Service Science is indeed a multidisciplinary "open source" project, based upon pillars represented by computer science, human behavior, organizational theory, industrial engineering, business strategy, management sciences, social and cognitive sciences, legal sciences (Spohrer, Maglio, Bailey, Gruhl, 2007; Spohrer, Vargo, Maglio, Caswell 2008). In terms of Science it investigates what service systems are and how they evolve, and about roles of people, knowledge, shared information and technology, as well as the relevance of customers

(as demand) inside production processes (as supply); in terms of Management it investigates how improve efficiency evaluation, relations sustainability and systems relations; in terms of engineering it develops new technologies, adequate approaches to promote information check, measurement and diffusion. Service Science is emerging as a unique field, aimed to discover the complex service systems underlying logic, to establish a common language and a unique system thinking, to nourish productivity, quality, performance, compliance, to improve relationship and innovation rates across the service sector, to develop the skills required in a services-led economy, the knowledge (as intelligence accompanied to and through experience for competitive advantages), and the processes (as key element in organizational skills development).

Network Theory is both a way of thinking in relationships and interaction and a methodology to address complexity and context. It can be used with different degrees of sophistication: as a basis for verbal treatise (discussion or text), graphics (from sketches of nodes and links to computer generated diagrams), or mathematical applications. Networking relationships were first emphasized in the 1970s, when studies noted an increase in connections among firms characterized by exchange of information, continuity in relations, and increased commitment, trust, and collaboration (Richardson, 1972; Hakansson and Ostberg, 1975). Various terms have been used to describe these voluntary ties among firms and other economic actors, including "heterarchy" (Hedlund, 1986) and "polycentic structure"' (Forsgren, Holm and Johanson, 1991); however, the term "network" has now become generally accepted to describe this emerging economic entities (Bartlett and Ghoshal, 1990). Studies of network genesis have identified two basic mechanisms in network development: (i) several enterprises that are inherently involved in a common production process deciding to combine their resources and competencies; and/or (ii) a leader enterprise attracting other businesses to join in its activities. In this regard, several authors have taken a particular interest in the so-called "strategic network approach", primarily interested in the creation and management of intentionally-formed network organizations featuring a specific set of actors (Polese, 2009). Network theory is a systems approach which in marketing has mainly been applied to B2B marketing but has equal potential for B2C (business-to-consumer) marketing and consequently to marketing in general (Polese, Gummesson, 2009). Marketing is a part of or a perspective on management and to become efficient marketing should be seen in a management context; marketing-oriented management rather than marketing management. Two network approaches will be presented. One is the Viable System Approach (VSA), grounded in systems thinking, a relational based view (RBV) and network theory, postulating every business as a system, immerged in a relational context looking for competitive profiles (viability) through interaction with other actors/stakeholders (Golinelli, 2000, Barile, 2008). The other is Many-to-Many Marketing which is a general marketing approach that describes, analyzes and utilizes the network properties of marketing (Gummesson, 2007). It applies to marketing in general and recognizes that both suppliers and customers operate in complex network contexts.

Last decades have proved that Customer Relationship Management and one-to-one marketing has not succeeded in business practices due to the narrow focus based on the dyadic relationship between a single supplier and a single customer, hence proposing marketing strategies based upon the acknowledgment that businesses interact one with the other within many-to-many networks (Gummesson, 2004). Basically the intriguing suggestion is that no-one can be considered really isolated, starting from individuals (Donne, 1624) and arriving to businesses (Hakansson and Snehota, 1995); in such an interconnected world (Castells, 1996) how could marketers and enterprises elude their network connections attempting strategies unable to capture the power and usefulness of these relationships (Capra, 1997; 2002). Therefore the three key variables of marketing seem to be relationships, networks and interaction according to a Relationship Marketing, which is "interaction in networks of relationships" (Gummesson, 2004).

The VSA is a theory linked with network analysis and based on general system theories, or rather on social analysis interpreting business behavior within a dense pattern of interactions in which the firm, being a viable system itself, immerged in a context, is in contact with viable systems and single components (Golinelli et al, 2001; Barile, 2006, 2008; Golinelli, 2009). It is, hence, a systemic theory, a methodological approach not only capable of interpreting and directing nowadays business arena, as well as everyday life and decision making processes of organizations, groups and communities, individuals. It proposes a new representation of the behavioral approach to business and relative interactions with its context (the theory), and suggests an interpretation of consolidated and strategic organizational, and managerial models (the practice).

We now have the opportunity to compare different approaches, several points of view, new perspectives enabling a better and wider comprehension of service and system theories (in terms of resource sharing , value co-creation, relationships, interactions, , networks, , etc.), within nowadays new business frameworks.

More than eighteen months after the first talk about the Forum we can proudly say we were right. More that 240 abstract from 19 countries in the 5 world continents were proposed, and we were forced into a hard selection of them. About half of them were accepted for presentation, and now the Forum will be attended by more than 150 participants. We feel to tank who believed in the strength of the idea from the beginning, Bob Lusch, Steve Vargo, Jim Spohrer, and Jaqueline Pels; moreover we thank Gaetano Golinelli, Sergio Barile and Paolo Stampacchia for their scientific suggestions and support in making the Forum a reality.

Service has arrived in a new and better shape, more prepared to deal with the contemporary economy. Still this is a starting point: Service deserves more attention on our research agenda!

Naples, June 2009.

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