Chapter 13
An Overview of the Contribution of Systems Thinking Within Management and Marketing

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Abstract In recent years, common interests have led the fields of marketing and management to differentiate themselves, even in similar research areas. This chapter provides an overview of systems thinking in these two disciplines, reading the main concepts in an integrated way according to relational and value perspectives. A systematic literature review is conducted using the Web of Science, Scopus and Google Scholar databases, focusing on applications of the Viable System Model and the viable Systems approach. Due to the adoption of systems thinking, the paper can serve to spur further studies to better define the boundaries and the eventual inclusion of marketing in management and vice-versa.

13.1 Introduction

Systems thinking addresses the process of thinking by using *system* ideas in natural, designed or management systems, while *systems theory* describes the theory of systems, taking as given the status of systems as a thing in the world (Checkland 1999). Drawing on Von Bertalanffy's (1956) seminal work, Maturana and Varela and

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Senge shed light on numerous phenomena (Maturana and Varela 1975; Senge and Sterman 1992) by focusing on the relationships between different and sometimes interacting elements. Their contributions arose from the need to better understand the whole—*shifting the focus from parts to the whole* (Checkland 1997; Weinberg 2001; Jackson 2003)—and they investigated the dynamics of relationships by seeking to better define medium and long-term interactions.

This chapter provides an overview of systems thinking in business studies, with an emphasis on marketing and management. Although scholars and practitioners (Birnbaum et al. 1990; Barile et al. 2012a) have addressed the relevance of management's role in business studies with a focus on marketing, there is also a lively international debate that addresses the relationship between marketing and management. This work approaches the main concepts of marketing and management in an integrated way, and it avoids giving preference to one issue over the other to overcome a reductionist vision of marketing, which has *generally been considered to be just a useful communication tool*. The current paper aims to identify the common elements and paths of the relationships and value at the root of business management. Further, management can be considered to be a set of rules and models that are aimed at efficiency, organization, and strategic-thinking.

The chapter is structured as follows: Sect. 13.2 provides a brief literature review of different perspectives on systems theories; Sect. 13.3 presents the methodology that is used to investigate marketing and management according to systems thinking through a systematic literature analysis on the topics; Sect. 13.4 shows the findings of the literature review and explores the main traits of systems thinking, the Viable System Model and the viable Systems approach (Sect. 13.4.1) and it analyses the contribution of systems thinking to marketing and management (Sects. 13.4.2 and 13.4.3), and, finally, it compares the structural, behavioural and systems perspectives and their contribution to value creation (Sect. 13.4.4). Discussion (Sect. 13.5) and Conclusions (Sect. 13.6) follow.

13.2 Systems Theories Perspectives

A *system* can be defined as an entity that is made up of parts (elements) that are connected in a mutual, interactive relationship and share a specific aim (von Bertalanffy 1962; Parsons 1965; Barile 2006, 2008). The contexts and situations of the interactions and relationships of different entities such as nature, science, and society can be investigated as systems (Tien and Berg 2003).

Von Bertalanffy (1956) was among the first scientists to consider a system as a scientific paradigm and to study the underlying relevance of interactions among systems. *Systems theories* are useful to identify general references that can be extended to every type of relational activity between actors and/or elements, which can support the understanding of complex phenomena.

According to Mele et al. (2010), several perspectives have paved the way for the development of systems theories including General Systems Theory (GST),

Cybernetics (Beer 1975), Organization, Biology (Maturana and Varela 1975) and Sociology. Indeed, different approaches have been dedicated to systems analysis including viable systems (Espejo and Harnden 1989; Barile 2009), service systems, system dynamics and smart systems (Barile and Polese 2010a, b; Demirkan et al. 2011a, b), intelligent systems, economics systems, eco-systems (Wieland et al. 2012; Vargo and Lusch 2016; Polese and Carrubbo 2016) and many others.

Within the *GST*, two relevant approaches have assumed a growing importance and provide a strong contribution to the understanding of the relationships and interactions inside and between systems and the environment: the Viable System Model (VSM) and the viable Systems approach (*vSa*). According to these theories, the adaptability of systems to environmental changes is of great importance and is related to the informative variety (Ashby 1958) and systems openness (Katz and Kahn 1978), which contributes to specific actions such as organization and self-organization. The *Viable System Model (VSM)* (Beer 1972; Espejo 1999) is rooted in cybernetics and describes a system as an entity that is adaptable for the purpose of surviving in its changing environment (Beer 1972). The model focuses on conceptual tools to obtain an understanding of the organization of systems to redesign them through: (i) changes in management; (ii) understanding the organization as an integrated whole; and (iii) evaluating the essential functions of implementation, coordination, control, intelligence and policy (Beer 1972; Espejo and Harnden 1989; Espejo 1999; Christopher 2007). According to Stafford Beer (1975), a viable system is able to survive and remain closed and integral; it is homeostatically balanced both internally and externally, and it has mechanisms and opportunities to expand and learn, to develop and adapt, in other words, to became even more effective in its environment.

The *viable Systems approach (vSa)* (Golinelli 2005, 2010; Barile 2006, 2008) identifies certain relevant differences, for example, related to the new interpretation of consolidated strategic organizational and managerial models such as sub-systems and supra-systems. Sub-systems focus on the analysis of the relationships among enterprises' internal components, while supra-systems focus on the connections between enterprises and other influencing systemic entities within their context (Golinelli 2000, 2005; Barile 2006, 2008). Other main differences can be identified from the emergence perspective as opposed to the functionalist perspective, and from the constructivist approach as opposed to the cybernetic approach; network logic, which overcomes the hierarchical model, can represent the relationships between actors (Barile et al. 2015).

Open systems are of great importance in *business organization studies* (Katz and Kahn 1966), with a focus on social systems and the relevance of energy-material exchanges between organizations and environment. In this context, Emery and Trist's (1960) contribution underscores two company components that are considered to be a system: the social component (people) and the technical component (technology and machines).

Biology and Sociology are the two main disciplines that focus on systems theory. Based on the work of Maturana and Varela (1975), the relevance of system adaptability has been recognized as arising from the internal ability to adapt to

emerging changes. Their interpretation of *autopoiesis—the capability to reproduce and maintain itself*—has also been widely used in Sociology (Luhmann 1990), in which a system is defined as an area in which the complexity can be reduced (the internal side of the system). This approach contributes to a better understanding of using self-regulation and self-organization to manage complexity. According to the previous findings, systems can be considered learning entities that are able to understand the surrounding environment due to knowledge functions that contribute to the reduction of internal entropy and to the increase of external entropy (Von Foerster 1981).

With regard to *System Dynamics and Smart Systems*, many past and current studies have contributed to a better understanding of the influence of systems theories on business topics. The most relevant concepts for these two complementary approaches are learning relevance, self-regulation, and reconfiguration (Sterman 1994); intelligence is considered to be both internal and external to the system. In particular, in terms of "smart" systems (Basole and Rouse 2008; Demirkan et al. 2008), the *vSa* offers a useful contribution (Barile and Polese 2010b; Polese et al. 2012). In these studies, systems are considered to be smart, searching for dynamic and intelligent IT-based services, and they are characterized by viable behaviour able to promote long-lasting system competitiveness and performance (Napoletano and Carrubbo 2011).

This brief analysis underscores the relevance of the elements and characteristics that have been derived from systems theories, mainly the role of relationships, adjustments, environment, and complexity.

13.3   Methodology

This study aims to provide an overview of the meanings and approaches that are related to management and marketing in business studies. It is based on a literature review of the contributions that analyse management and marketing through the lens of systems thinking theories. The review method is conducted in three consecutive stages:

1. Literature search;
2. Assessment and clustering of the evidence base;
3. Analysis and synthesis of the findings.

Literature Search We opted to search the relevant literature in the electronic databases Scopus, Web of Science and Google Scholar, which contain extensive literature on the topics of interest. We considered the time range from 2000 to 2016 to identify the most recent evolutionary trajectories of the debate on management and marketing meanings. The searches were performed using keyword combinations, looking for matches in the fields (Title) and/or (Abstract) and/or (Article

Keywords). We employed two keyword combinations and located a total of 332 results:

- "Systems thinking" AND "Management";
- "Systems thinking" AND "Marketing".

Assessment and Clustering of the Evidence Base The first examination of the identified publications made it clear that there were redundant entries that were not related to this particular study. Hence, the gathered evidence base was examined to determine the studies most relevant to the particular focus and scope to be applied here. For example, searching with the keyword combination ("systems thinking" and "management") returned a publication titled "An essential distinction of agile software development processes based on systems thinking in software engineering management" (Wendorff 2002), which has a different focus than that of this study. Each title and abstract and, in case of doubts, the introduction and conclusion sections of the paper, were carefully read; sometimes the entire article was skimmed before the final decision was made.

In particular, the research on management identified 320 results:

- 122 were discarded (being not relevant for the research criteria) after reading the title
- 60 were discarded (being not relevant for the research criteria) after reading the abstract
- 9 were discarded (being not relevant for the research criteria) after reading the text

Then, 129 were saved and analysed.
The research on marketing identified 12 results:

- 3 were discarded (being not relevant for the research criteria) after reading the title
- 9 were added from the bibliographies of the analysed papers, being considered interesting and useful for the research

In total, 18 were analysed.
Ultimately, 147 articles were selected for the final analysis.

Some of the selected articles apply *systems thinking* in general to management and marketing, while others focus more on specific theories such as *VSM* or *vSa*; to facilitate the analysis and synthesis of the results, the contributions that belong to the two main categories were grouped, and a third cluster was left for other approaches.

We noted that only a few works concerning management addressed management science as a whole, while the majority were focused on complexity theory and other specific areas of operational management, which, for a faster and better analysis, we divided into different thematic groups: knowledge, project, supply chain, innovation, quality, risk and healthcare management and decision making.

Analysis and Synthesis of the Findings After the analysis, we explained the main findings related to the contribution of the systems theories in understanding management and marketing and identifying the different perspectives that emerge in the literature.

13.4 Literature Review on Management and Marketing in Systems Thinking

13.4.1 The Main Traits of Systems Thinking, VSM and vSa

The analysis of the selected papers shows that most of the contributions use *systems thinking* as a framework that can be applied to the study of phenomena. Several systems theories have also been applied to management and marketing studies; however, the most common one seems to be complexity theory. There is a widely held view that systems thinking is superior to other approaches in addressing complexity (Maani and Maharaj 2004); thus, it considers strategy in terms of 'order out of chaos' and defines strategic decision-making as a complex activity because it involves not only different issues but also many interacting factors and stakeholders (Sheffield et al. 2012; Donald 2010; Powell 2004). Several authors have drawn on systems thinking and complexity theory to re-conceptualize and manage organizations as complex adaptive systems (Reiman et al. 2015; Rabaey 2013).

Another widespread theory in management studies is *VSM,* which has been considered to be a theoretical framework that leads to a better understanding of *sustainability's* role in several areas, such as:

1. Complex contexts (Espinosa et al. 2008);
2. Knowledge management (Choi and Hilton 2005; Ganzert et al. 2012; Paucar-Caceres and Pagano 2009);
3. Visualization of viable inter-organizational relationships that can be integrated along a whole supply chain and in product development (Puche et al. 2016; Chroneer and Mirijamdotter 2009);
4. Adaptability, in terms of the challenges that must be faced to link changes among the stakeholders (Murad and Cavana 2012).

However, *vSa* is more prevalent in marketing studies, and it is considered to be a useful approach to understand not only the dynamic interactions in many-to-many marketing networks (Barile and Polese 2010a, b) but also the role of customers in value co-creation processes (Barile et al. 2012a, b).

Focusing on systems thinking, it emerges that *vSa* has been widely applied to management studies to explain managerial theory through systemic paradigms. This process is closely connected to the operational research, the study of internal processes, planning and control, problem solving and decision making, which can

be applied to specific areas such as knowledge, project risk, innovation and supply chain management, and quality control (Carrubbo et al. 2015; De Santo et al. 2011). However, few studies have combined the two concepts.

In marketing, systems thinking has been mainly applied to two macro-areas: the study of networks and value co-creation, and social marketing. Therefore, these studies are focused on relationships and interactions between all actors, while the investigation is gradually shifting to the external dimension of organizations, especially with regard to customers.

13.4.2 Systems Thinking and Management

In management studies, the role of systems thinking involves the following activities (Mingers and White 2010; Allen 2000; Polese et al. 2010; Barile et al. 2014):

- Holistic observation of phenomena, which is considered to be a set of different elements that interact within a specific environment;
- Attribution of a growing importance to relationships or interactions between elements, which is considered to be more significant than the elements themselves in defining a system's behaviour;
- Definition of systems' hierarchical levels of the properties that emerge at different levels and of the mutual causality within and between levels.

Systems thinking has been deeply connected to the development of *operational research and management science* (Mingers and White 2010; Jackson 2009; Hitchins 2003) and change management processes (Haines 2000) with a focus on the internal managerial cycle that includes planning, organizing, leading, and controlling paradigms. In the same vein, Allen (2000) sees the organization as a system and the scheduling of activities as dependent on different organizational levels.

Systems thinking has been largely applied to *project management* as a flexible approach to the management of innovations (Cavaleri et al. 2012), complexity, and uncertainty to make innovation projects as successful as possible (Bendoly 2013; Williams 2016; Chronéer and Backlund 2015; Costello et al. 2002; Lyneis and Ford 2007; Mawby and Stupples 2002; Winter and Checkland 2003).

However, in *knowledge management*, a systems approach fosters the internal dialogue and the resource exchange (Mele et al. 2010; Rana et al. 2013) that support the ability to generate new ideas, processes, and products (Urze and Abreu 2014). This approach also enables the achievement of a complete view of the whole organization (Ndlela 2014), which allows for the identification of benefits and opportunities (Barcelo-Valenzuela et al. 2008). In this way, managers can make better and informed decisions in terms of asset allocation and management (Sole and Schiuma 2010).

In recent years, several researchers have shown that systems thinking can be fundamental to the analysis of complex organizational operations, for example,

those that are related to supply chain management (Beth et al. 2003; Holweg and Pil 2008; Moon and Kim 2005). According to Maull et al. (2012), the use of systems thinking can lead the analysis to overcome boundaries, hierarchies, and mechanisms of control in the supply chain.

Finally, other managerial processes have been extensively analysed according to systems thinking, including risk management (O'Donnell 2005; Kamppinen, et al. 2008; Lee and Green 2015), innovation management (Shen et al. 2009; Kong and Li 2007, 2008; Xiang-yu and Xiang-yang 2007), and quality management (Wolf et al. 2011; Chen et al. 2014; Guerreiro et al. 2014; Conti 2010).

Moreover, the application of systems thinking has been extended beyond the traditional operational boundaries, as confirmed by its application to specific areas such as healthcare. In fact, most of the actual healthcare research stresses the systems approach to assume a holistic view of a "system" at every operational level and to involve a growing number of stakeholders, particularly patients (Mutingi and Mbohwa 2014; Pentland et al. 2014; Waliullah and Schell 2013; Paina et al. 2014; Turnbull 2002; Karppinen et al. 2014; Adam 2014).

13.4.3   Systems Thinking and Marketing

In marketing, systems thinking has been mainly applied to the study of relationships among the actors (including customers) who are involved in value creation and delivery. Therefore, the focus has shifted from internal processes and operations to interactions with the external environment. One of the most investigated marketing frameworks according to systems thinking is *network theory*. In particular, a marketing system is defined as a network of individuals, groups, and/or entities that are linked directly or indirectly through sequential or shared participations in an economic exchange (Layton 2007). This network can also be considered to be the sum of the patterns that emerge from transaction flows (Layton 2011). Networks are not merely networks (aggregations of relationships); they are considered to be dynamic (Vargo and Lusch 2011) and open systems that are able to improve not only system sharing or the application of resources but also their own state, gaining external resources (Spohrer et al. 2008). *VSa* supports the understanding of dynamic interactions in many-to-many marketing networks (Barile and Polese 2010a, b).

Another marketing framework that has been analysed according to systems theories is that of *value co-creation*, which is deeply related to Service Research. As Barile and Polese (2011) argued, given the systemic nature of value creation, managers must adopt a systemic approach, which leads to a general observation of complex phenomena that facilitate value exchanges with customers (Vargo et al. 2008; Lusch et al. 2009). Moreover, value can be specifically accessed on a relative basis, in other words, through a comparison with competitors' offerings. Consequently, according to Barile et al. (2012a, b), managers should adopt a systemic approach that is rooted in a wider perspective that includes customers, partners, competitors, and other actors.

The contribution of *vSa* to marketing theories mainly comes from its wider systemic perspective, and it suggests direct efforts to offer increased dignity to the marketing debate; thus, more general theories facilitate the understanding of major changes in market conditions and the usefulness of technological advance (Barile et al. 2012a, b). In highly competitive contexts, the growth is rapid, the innovation is rich, the local conditions are idiosyncratic, and the technological options are increasingly complex. Consequently, marketing managers must understand the dynamics so they can affect industry structure. This allows them to assess market strategic value, adopt a system methodology, and develop a holistic frame of reference that can ultimately allow them to focus on relevant issues and avoid the endless search for more details and the proliferation of useless information (Pagani and Otto 2013).

A systems theory approach, which considers society to be a *complex adaptive system*, is suggested as a useful framework for social marketing campaigns because it can support new identities and increase sustainable behavioural changes (Conroy and Allen 2010). It has also been reported that all business exchanges involve systems and are characterized by a high degree of complexity, which is higher than is apparent. Moreover, systems thinking helps decision makers to more deeply understand the organizational problems that they face (Woodside 2006).

13.4.4   The Structural, Behavioural and System Perspective in Systems Thinking and Implications for the Value Creation Process

According to systems thinking and its paradigmatic developments, reflections about complexity and its management, as well as the interpretative consequences of analysed phenomena, are fundamental. In fact, phenomena can also be analysed assuming a structural and behavioural perspective, which can provide different insights into the way in which new systems aimed at value creation emerge and how they might be managed (Barile et al. 2013b; Carrubbo 2013).

No system is equal to another; however, each is characterized by specific "structural" elements that led to its own creation and the knowledge (technicalities), practical experience (practicalities), and competences (skills and abilities) that arise over time and as the result of interactions (even when they are not conscious).

The understanding of the leverages that can be used to promote the development and the implementation of a synergy among systems (intended as entities) is fundamental. This can be useful in several contexts, such as teaching (in a university classroom), working (during a programming meeting), security (during "truth" talks or questioning), in the social professions (psychoanalytical treatments), and in economy and business areas by considering the potential interactions between systemic-viable entities that act in a similar context. In all of these cases, the investigation of the behaviours and reactions that emerge from a direct comparison

of subjects is fundamental to classify the emerging results, create statistics, and build forecasting or interpretative models that can be used in heterogeneous applicative contexts.

However, according to systems thinking, the managerial perspective can change dramatically because the interpretative tools become merely a part of an identitarian path that is aimed at structuring formalizations, languages, and theoretical purposes. A schematic synthesis of this paradigm's ability to simplify and summarize (which Barile and Golinelli have developed and advanced in recent years) has led to the emergence of structural, behavioural, and systemic-viable considerations that have the capacity to identify the main features that characterize a system over time, as is shown in Table 13.1.

Following the above-listed definitions of the main founders of this conceptual movement, it is possible to achieve a graphic representation of a viable system's building and functioning and its recurring internal scheme and/or structure.

According to the new systemic paradigm, Fritjof Capra (2002) argued that the relationship between the parts and the whole is inverted. The properties of the parts can be understood only *in light of the dynamics as they are related to the whole*. *At last, the parties do not exist*. What we call part is merely a configuration in a close network of relationships.

Due to the organization of internal components and the activation of integrative resources, value co-creation can occur, which enhances systems competitiveness and, consequently, improves their ability to survive. These "relational" systems are open systems that are embedded in the context in which they act and from which they can gain the external resources that are needed for their inner objectives of development and achievement. One of the most important inferences of this purpose is the rationalization and the subsequent management of decision-making, which is aimed at designing personal cognitive alignment according to a value perspective. If a satisfying decision arises from knowledge and informative resonance between the involved decision makers, the reciprocal value system must be tested to better understand the element that influences the complexity management. The client focus is also emphasized due to historical suggestions that were offered by Customer Relationship Management (CSR), Total Quality Management (TQM) or the Total Relationship Marketing, as being coherent with a competitive and sustainable approach to relationship management, which is fundamental in terms of value creation.

Finally, according to *vSa*, value creation processes synthetize a firm's ability to develop a coherent level of "consonance" and "resonance" in its own context. This context is characterized by several sub-systems, and the retention of productive resources is more or less critical in terms of co-creation optimization. In this process the implementation and the support of strategic control are fundamental not only to describe and monitor organizational processes but also to shift the mission and strategies in an optimized performance that is aimed at value creation and sharing.

Table 13.1 Different perspectives in systems thinking

Object of analysis	From a structural perspective	From a behavioural perspective	From a systems perspective
Origin and scope	**The structure of an organization originates from a given set of shared rules and relational connections** The structure aims to survive in function of various systems associated with it, even if not at the same time for each of them	Visible skills are a result of the **inherent capabilities**	A viable system lives and its goal is to **survive** in an environment populated by other viable systems The **viability** is commensurate with the realization of the dispositions to change
Relations and Interactions	**The system 'realizes' the structure and the relationship qualifies both of them**	**From the same relation originate more interactions**, respecting the same distinction between function and role in the moment in which the second can express the first Education is the form; the routine determines that the act is substance	Each **context is subjectively defined** and extracted by a general environment by each viable system's decision-making body, and in it the system is immersed adaptively
Perception of the context and adaptability	The **contexts are subjective** as a function of specific objectives and changing	The **rule is the application of a law**, and determines how often the rule itself can also change, if considered to be positive	Each viable system distinguishes and identifies the various supra-systems **relevant in its context**, because of its specific end goal A viable system has the ability to regulate and manage **independently** the dynamics of its **adjustment**
Preconditions to take actions	**Contingency** is influence, **planning** is critical, their composition is relevant	The **categorical values** form the basis for a personal interpretation of the events	The **convergence of the systems** and their entities of reference towards the same point starting from different initial positions is defined consonance (synthesis of compatibility, tune, affinity, etc.) and the variation of the gradient of this displacement vector (with a defined direction and verse) represents its measurement

Table 13.1 (continued)

Object of analysis	From a structural perspective	From a behavioural perspective	From a systems perspective
Acting	The **supra-systems are capable of influencing the decisions of a system,** in particular in direct effects on its own sub-systems	The interpretation schemes shape the **information** and categories establish their **priorities** The **choices** represent the realization of the decisions as a result of the action of the interpretation scheme	The acceleration (wanted) of this relation between (among) two (or more) elements is **resonance** (defined as the modification of consonance over time)

Elaboration from: Barile et al. (2013a)

13.5   Discussion

In recent years, despite their pertinence and specialization, marketing and management have been considered to be either synonymous or different; however, somewhat similar schemes and thinking paradigms exist, or they can be seen as integrated tools that can contribute to the definition of strategy and building the path towards gaining competitive advantage with a focus on value and relationships. These fundamental concepts fit with systems thinking, which is sensitive to the management of value and relationships—*especially in the direct application to the companies*—and to the dynamic approach to the study of interactions between parts with the aim of benefiting a whole system.

The interaction and its value are considered to be the cause and effect of the value that derives from systemic relationships between elements of systems that are characterized by involvement, knowledge—*in value recognition*—and the ability to act. These are properties of systems (individuals, groups of functions) that belong to companies, which are called upon to manage complexity in marketing and management activities and are required to give significance to the relationships and their achievement as well as to explain the value creation process, managing the relationship between the context and the economic environment. In this sense, marketing and management could be supported by system theories in every type of organization, in particular in firms that must manage complexity and sustainability with regard to the environment.

The literature review underscores that systems thinking has been widely applied to management, while few studies have focused on marketing and consequently, these disciplines have sometimes been investigated in different ways. In general, different key concepts emerge in management: complexity such as the variety and variability of the external and internal phenomena that affect plans, forecasts, company performance and strategy as well as studies on decision making and problem solving. The relevant systemic concepts that are applied to the management research are holism, autopoiesis, homeostasis, and layer hierarchy, while the

most discussed systems theories are the complexity theory, cybernetics, system dynamics, Soft OR, VSM, and critical systems. However, in marketing, systems thinking is mainly applied to two macro-areas: network studies and value co-creation and social marketing. Therefore, the focus is on the relationships and interactions among actors both internally and externally to the organization.

The most relevant systemic properties are system openness, resource exchange with the external environment and, in this case, dynamic system vision. The need for the management of this growing complexity also affects marketing. In this case, it is related to market dynamism, consumer attitude and relationship unpredictability.

13.6 Conclusions and Managerial Implications

This research shows the orientation of the use of systems thinking among researchers and business studies with a specific focus on marketing and management. It should also be noted that, in general, it is not simple to distinguish between marketing and management studies when they address certain common topics. However, according to both management and marketing logic, the approach is often traditional, and if the marketing interpretation is mainly closer to sales and communications, the management interpretation is closer to activities and operation, even if some of the contributions are focused on business governance.

This study underscores the need to overcome the traditional logics that practitioners often assume to support the shift towards relational concepts and value, which are considered to be the base concepts to stimulate a firm's value proposition. In the international context, the gap between marketing and management is narrowing and, consequently, systems theories may be considered to be specific frameworks that can be used to pave the way for meanings, rules, and models integration; in several cases, the need for interpreting these two logics also stems from systems theories. This situation seems to be due to specific schools of thought and practices, such as the traditional logic that considers marketing to be a "function"—*and for this reason marketing is included in management, thus systems thinking may contribute to a better understanding of firm dynamics*—and the more advanced logic that considers marketing as a strategic system of activities and tools to manage and stimulate the emersion of value and relationships that work for the competitive advantage of companies. According to these advanced thoughts, the sensitivity to market dynamics and to internal changes represents some of the most important managerial competence (top management) that should be developed in a "marketing and systemic logic". Consequently, it is possible to consider that the differences between marketing and management are becoming smoother.

In light of the reported experiences and future research trends, this chapter argues that there has been a great deal of conceptual research, even if the literature still calls for further applied study. In particular, among business studies, systems theories are certainly important and can be considered to be an interesting and broad

contribution to the comprehension of the nature and dynamics at the root of relationships and interactions between the elements that allow companies to be considered systems embedded in systems.

The research evolution has led to knowledge advancements, and systems studies are based on the integration of different paradigms that use different methods and approaches to better understand the relational dynamics among interacting elements. The "arising" system is one of the most representative statements in the research on systemic dynamics, enhancing the comprehension of the process of definition of the common core of systems and, consequently, whether they are working (activating themselves) to reach a shared goal.

The marketing and management tradition reveals some important corporate needs including the definition of a target market that is able to capture a latent demand and the organizational need to adapt to a changing environment. *De facto*, the latter is a very complex feature, which has been applied over the past years to many different fields and, above all, has been able to stimulate several researchers to define the optimal complexity model. It is evident that companies are not only made up of people, but that they also have the skills and competencies that allow them to gradually adjust, transform, and restructure themselves through system interactions (Golinelli 2005).

Whereas the different approaches to system analysis are characterized by some common elements and, above all, are based on recurring and fundamental concepts such as relationships, value, complexity, and adaptability, it may be appropriate to bring marketing and management research to higher levels, eventually reducing the differences among their approaches. However, the literature is still lacking a shared definition of the edges between the two research areas; thus, when this difference arises, marketing tends to be interpreted as a set of techniques based on communications, sales and, in some cases, on market research or models that are used to identify investment optimization and to reach specific targets. The same holds for management even if, according to systems logic, there is always the need to root managerial studies in cost optimization, sometimes leaving aside all of the value components that are different from profit. A systemic approach might broaden managers' horizons; thus, a wider vision of the roles of relationships and value as well as a less narrow approach to profit or efficiency might offer more opportunities to provide value.

Systems thinking might also contribute to the definition of new approaches to marketing and management that could be applied in specific research areas and considered as a comprehensive approach to scientific research. Systems theories' contributions might especially arise from their systemic, inclusive, relational nature, and, above all, from the importance that is given to the relationships with the surrounding environment. Therefore, even if practitioners and scholars have still not defined the edges of marketing and management, the theoretical frameworks of systems theory might contribute to the definition of a possible vision that, before their nature and function are defined in the near future, might express the necessity for both the research areas to base their investigation in relationships and value. The eventual differences will be identified according to a specific approach to the starting elements of relationships and value.

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