

Article

Inside Out: Organizations as Service Systems Equipped with Relational Boundaries

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Abstract: Currently, literature on organizational boundaries is at the center of a heated debate, characterized by a shift from a transactional approach to a broader immaterial perspective centered on the concept of boundless organizations. However, the overestimation of the effects of contemporary dematerialization on business processes can lead to the progressive neglect of the existence of corporate borders. In light of this consideration, the present work aims at proposing a new type of criterion for defining organizational boundaries, halfway between the conception of the firm's total openness and total closure. To this end, the authors envisage the use of a new interpretive logic defined as “relational”, resulting from the specification of the systemic view (and as the sum of the logic underlying the viable systems approach (VSA)). This approach views the definition of boundaries. Therefore, in the large and intricate scenery of the studies dedicated to organizational boundaries, this work contributes to a better understanding of border selection as an interactive and changeable process capable of pushing organizations towards a greater awareness of their strategic dimension. This paper also offers some insights for future research, suggesting that both scholars and professionals investigate, firstly, new frontiers for the identification of organizational boundaries and, secondly, the possible positive repercussions that new organizational redesign modes could determine for a greater competitive success.

Keywords: boundary; boundaries; organization; organizational boundary; organizational boundaries; viable system approach; relational view; relational criterion; systemic-relational perspective; service system

1. Introduction

Currently, in literature the concept of organizational boundary is at the center of a heated debate [1,2]. In particular, scholars and professionals are paying an increasing attention to the impact of boundaries on the effectiveness of strategies adopted to achieve a defensible competitive advantage [3,4]. An adequate management of organizations' boundaries, in fact, represents an important strategic variable [5], capable of producing a very positive impact on the competitive position achieved or reachable by an organization over time. This is one of the main reasons for which several authors have cultivated a vivid interest in the study of organizational boundaries [6,7].

However, over the years, the study of organizational boundaries has been marked by the alternation of schools of thought with different or even conflicting conceptions. In fact, while initially borders were intended as net separation lines between the inside and outside of organization [8], this approach has been gradually replaced by a vision oriented to the existence of blurred boundaries [9].

Moreover, recently, the internationalization of markets [10], the spread of new technologies [11,12], the assertion of intangible services on physical goods [13–16] and the spread of new working arrangements [17] have fostered the diffusion of a new vision based on the assumption that contemporary organizations have permeable and invisible borders [18]. In this perspective, boundaries are intended not as insurmountable barriers, but rather as critical linking mechanisms for resources sharing aimed at promoting a lasting organizational success over time [19]. In other words, they should be imagined not as well-defined lines, but as an extended area [20].

Over the years, some scholars [21,22] have even suggested the complete absence of organizational boundaries, believing them unable to allow a precise distinction between internal and external resources [23]. However, according to [20], the idea of organization without any boundaries has no solid conceptual foundation: the boundary is an essential organizational element, which exists because, conceptually, it distinguishes from something external. This vision, therefore, besides hypothesizing the existence of boundaries, considers them as an essential prerequisite for identifying organizations, since they allow for their distinction from the surrounding environment [24].

In the light of the intricate scenario above proposed, the work, starting with a literature review about the most common approaches for drawing organizational boundaries, seeks to envisage a new criterion for their identification, framed in systemic optics and based on the relational component as element capable of allowing for the distinction between the inside and the outside of organizations. Specifically, the purpose of the study is to propose a new criterion taking into account a series of “parameters” that, taken together, allow, with a certain approximation degree, awareness of organizations’ boundaries. Subsequently, conclusions are presented, research limitations are described and suggestions for future research are discussed.

2. Theoretical Background

2.1. Boundaries of Organizations

The first strong interest in identifying organizational boundaries came from the spread of the network theory [25,26] and general system theory [27].

With respect to the former, it is worth highlighting that it, in particular, has significantly contributed to the conceptual advancement of the studies related to boundaries of organizations. The reason for this influence is identifiable in the consideration according to which the paradigm underlying network theory seems to pervade and, in some way, condition all the literature devoted to organizational boundaries. For greater clarity, in Table 1 the paradigmatic assumptions of network theory affecting the interpretation of organizational boundaries are indicated, with specific regard to the concepts of society, actors and relations among them [28,29].

With regard to the general system theory, instead, it is possible to see organization as a well-defined body, clearly separate from the external environment, which is characterized by the presence of several elements interacting and influencing each other. This theory, however, appears mainly focused on the maintaining of systemic order rather than on the role played by boundaries in affecting organizational strategies [2]. This trend is also confirmed by subsequent studies, which seem to pay attention to organizational confinement only as a demarcation element of the system [24] from all that is external to it. In this regard, early conceptual orientation pushed to imagine organizational boundaries as clear dividing lines between the internal organization and its surrounding environment.

In parallel with this concept, however, the awareness about the difficulties in defining organization as a clearly defined entity, easily observable and separable from other parties [30] has gradually developed, especially by virtue of the observation that performed activities tend to expand far beyond traditional organizational boundaries [31].

In this regard, the authors of [29] support the idea of shaded organizational boundaries, which impede the clear distinction between internal and external resources. Likewise, Cantwell [32] introduces the concept of blurred organizational boundaries as further demonstration of an idea based

on the impossibility to trace precisely the boundaries of organizations. Consistently, Ashkenas [21] spreads the concept of permeable boundaries, comparing the organization to an entity able to change its size depending on emerging needs and opportunities. In line with this vision, Holmstrom and Roberts [29] point out the complexity of both public and private organizations and the problems that they typically they have to face for surviving and developing, and suggest that a broader view about organizational boundaries should be embraced. Even Schilling and Steensma [33] believe that the growing perceived need for companies to resort to outsourcing, especially technological outsourcing [34], cannot be explained by embracing a too narrow perspective, but rather by imagining a flexible enlargement of boundaries.

Table 1. The paradigmatic assumptions of network theory affecting the interpretation of organizational boundaries.

Concept	Assumption
Society	Society can be understood as a network of more or less extensive and structured relations
	Social structure is taken as a persistent pattern of relationships among all social positions
	Social structure is configured through networks, that is, sets of nodes and links that indicate their interconnections
	Social structure can be conceptualized in terms of durable patterns of relationship among multiple social actors
Actors	Each actor interacts with others influencing their behaviour
	Actors move among the social spaces generated by the intersection of different relational fields, in which every person plays a different social role and assumes a different position
	Actors and their actions are autonomous and interdependent (but not independent) units
Network	Network models are structural environments that provide opportunities or constraints to individual actions
	The pattern of social ties in which actors are inserted produces consequences determinant for them
	Relational links among actors allow for the transfer or the flow of material and immaterial resources

In addition, Haak [35] states that the consequences of market globalization have gradually pushed organizations aimed at being competitive to build and maintain lasting relationships with an increasing number of external parties. This vision leads us to believe even in surpassing the idea of boundaries, considering the organization as a completely open system [21,22]. Even Gadde [23] agrees with the breakdown of the concept of organizational boundaries, believing that this vision can help any size and type of organizations to develop by using not only internal resources. From these considerations, what emerges is a high importance attached to organizational dynamics, understood as the ability to expand without space and time limits.

However, according to Ashkenas [36], assuming the existence of boundaries does not imply in any way underestimating the dynamic organizational structure, necessary for competitive success [37]. In fact, it is widely recognized that the dynamic behavior of organizations acts as a critical factor for an advantage defensible over time against both current and potential competitors [38]. Even Heracleous [24] is in line with this vision. According to the author, in fact, admitting the importance of the organizations' adaptive capacity to manifesting contingencies cannot lead to thinking that the concept of boundary is outdated, because this idea would make the role played by internal actors in the organization meaningless, not allowing them to be distinguished from the external ones [39].

Identification Criteria of Organizational Boundaries

In light of what emerges in literature [40–42], the need to frame organizational phenomenon for a better contextualization of strategies has to take into consideration the identification of

boundaries [43]. In this regard, considerable efforts have been made by scholars [44,45] to enable management in order to be aware of their organization's boundaries in an attempt to leverage on strengths and minimize weaknesses (Table 2).

Table 2. Identification criteria of organizational boundaries.

Criterion	Description	Limits
Transaction costs	Organizational boundaries depend on the level of transactions and the responsiveness of performed transactions	Static orientation due to the idea according to which transactions depend on lots of complex dynamics, often difficult to predict
Contractual-legal	Organizational boundaries are influenced by the type and entity of formal agreements reached with other parties	No consideration of the circumstances in which an organization engages relationships based on informal characteristics
Ownership	A resource is understood as internal only whether it is owned by organization or is linked to it by a legal relationship comparable to the property right	Interpretive distortions in evaluating human resources
Space-time barriers	A resource is internal whether it is within the spatial (e.g., in stock) or time (e.g., at a certain hour) scope of organization	Not adequate with intangible resources (services)
Interest sharing	Resources having interests in common or pursuing shared objectives are considerable as internal	Organization is a syncretic system in which there are many different interests and goals
Job sharing	Organizational boundaries depend on the type of the undertaken activities and on how these ones fit together	The progressive trend towards the dematerialization of activities complicates to establish whether they are essential or marginal for organization's existence and development
Specific competences	The specific competences (direct knowledge) of an organization allow defining its size	Although the organization's know-how spins mainly around distinctive skills, it includes not only them, but also indirect competences
Communication	Only the resources capable of communicating with each other should be understood as internal	Distinct entities could be able to communicate with each other through the use of the same language without necessarily belonging to the same system
Governance action and autonomy	Boundaries are understood as a transition zone between inside and outside, which circumscribes resources and activities on which organization is able to exercise its discretionary power and extend its influence and control	Excessive discretion in the identification of boundaries

A first endeavor to explain the determinants of organizational boundaries is the “transaction costs criterion”, proposed by Coase [8]. The author, starting with the idea that organizations exist because of market failures, says that organizational boundaries depend on several factors, including the price formation mechanism, the degree of asset specificity, the possibility to realize economies of scale and, above all, the uncertainty level of transactions. In this regard, Williamson [46] adds that the most decisive element in affecting organizational boundaries is the responsiveness of performed transactions. The approach based on transaction costs has suffered some criticism over the years, largely due to its static orientation [37], which does not take into account the existence of numerous imbalances typically characterizing the market. Consistently, Nelson and Winter [47] point out that market functioning and price formation mechanisms are affected by complex dynamics often difficult to predict, thereby considering them as the only factors for defining boundaries of organizations could be extremely problematic.

The conceptual evolution of the transaction costs criterion has determined the emergence of a new approach for interpreting organizational boundaries: the “contractual-legal criterion”. It traces organizational boundaries on the basis of the type and entity of formal agreements reached with other parties [48]. However, even this vision presents a weak point [49]: it does not take into consideration the circumstances in which an organization engages informal relationships, not based on the conclusion of contracts but on purely social characteristics, such as trust, esteem, respect, etc. [50].

The interpretive formalism featuring the aforementioned approaches also characterizes the “ownership criterion” [51], according to which a resource can be considered as internal only if it is owned by organization or is linked to it by a legal relationship comparable to the property right. Therefore, all resources that do not satisfy this condition are understood as external. However, Galeotti and Garzella [20] claim that this criterion poses evident limitations, especially with regard to human resources. In this regard, the two authors show that the chance for any organization to “use” external consultants could foster the rise of interpretative distortions, not being able to define them as either internal or external.

Less formal than the previous criteria, the “space–time barriers criterion” leads to consideration of a resource as internal whether it is within the spatial (e.g., in stock) or time (e.g., at a certain hour) scope of organization [52]. Even this criterion, however, is recipient of criticism by Galeotti and Garzella [20], who contest its poor discriminating effectiveness with intangible resources (services), whose peculiar characteristics prevent establishing whether they have overcome the organization’s space-time barriers.

The criticisms attached to the above-discussed approaches has led scholars to shift their focus from organization as such to its elements and, more specifically, to the sharing of organizational processes [50]. This shift has allowed hypothesizing two further criteria for identifying boundaries of organizations: the “interest-sharing criterion” and the “job-sharing criterion”.

The former considers as internal all the resources with interests in common or which pursue shared objectives [53]. Such a statement, however, although suggestive, presents a limit, linkable to the frequent coexistence within the same organization, of individuals with different interests, although not necessarily in contrast [54]. An organization, in fact, is a syncretic system in which it frequently occurs that, for example, the production manager pursues different goals from those pursued by marketing manager.

The latter, instead, leads to consider as internal all the resources involved in activities determinant for the organization’s existence [55]. In this regard, Richardson [56] states that organizational boundaries depend on the type of the undertaken activities and on how these ones fit together. Norman and Ramirez [57], however, believe that this criterion is inadequate for drawing a line between the inside and outside of organization, especially because of the progressive trend towards the dematerialization of activities, which complicates establishing whether each of them is essential or marginal for the organization’s existence and development.

A further criterion used for identifying organizational boundaries is suggested by Granstrand et al. [58], according to which the specific competences (direct knowledge) of an organization allow defining its size. In light of this consideration, the “specific competences criterion” suggests considering as internal to the organization only its distinctive resources (core competences) and assuming as external those ones not connected to its specific know-how [59]. However, according to Araujo et al. [50], this approach appears weak, since it does not take into consideration that although organization’s know-how spins mainly around distinctive skills, it includes not only them, but also indirect competences, definable as the capabilities required to organize access to complementary and dissimilar capacities held by third parties [60].

The chance to distinguish between the inside and outside of organization by considering the commonality of language, instead, represents the foundation of the “communicational criterion”, according to which only the resources capable of communicating with each other should be understood as internal [61]. Even this approach, however, seems to be quite restrictive, since it does not consider that, very often, traditionally distinct entities (such as firm and family) could be able to communicate with each other through the use of the same language without necessarily belonging to the same system [20].

A worthwhile attempt to overcome the problems of the above described approaches to the definition of organizational boundaries is the “governance action and autonomy criterion”. It defines boundaries as a transition zone between inside and outside, which circumscribes resources and activities in which organization is able to exercise its discretionary power and extend its influence and

control [62]. Hence, what emerges with this last criterion is that boundaries, not only exist, but extend themselves by increasing their strategic importance, becoming, in this perspective, a border area, a sort of “business periphery” [63].

2.2. Systemic Conception of Organizational Boundaries

As the overview on organizational boundaries conducted in the previous paragraph reveals, over the course of time, in order to challenge the increasing environmental complexity, the need to overcome a transactional approach to the conceptualization of boundaries emerges. This necessity gradually results in a shift to a more comprehensive approach in which all the identification criteria are synergistically intended as a set of interrelated elements. Such a new mindset leads, in turn, to the adoption of systems vision in exploring the issue of organizational boundaries.

Starting from Aristotelian thinking centred on the transition from the part to the whole, systems theory is an interdisciplinary perspective, aimed at investigating every kind of social, natural or economic phenomenon according to a holistic view [64]. Rather than a simple theory, it represents a new mind-set proposing a series of instruments for observing reality as a whole, in which the individual properties of the single elements are less important than the interactions between the parts themselves [27].

The main research stream espousing this new mentality is the abovementioned general systems theory (GST [27,64,65]), which is among the first to propose the identification of organizational boundaries from an all-encompassing point of view. This widespread diffusion of this multidisciplinary framework (integrating biology, philosophy and sociology) gives birth to several autonomous systemic theories.

In particular, the application of this vision to managerial area introduces the concept of systemic organizations, intended as a unicum of integrated and interacting components [66], whose functioning can be understood firstly subdividing them into different parts and secondly recomposing them in an overall recognition. Furthermore, over the last years, managerial systemic theories such as service science, management and engineering [67] identified the key components of service systems acting as drivers for enhancing organization’s survival in hypercompetitive markets and for fostering co-evolution of all the parties towards a shared purpose.

Among all managerial frameworks rereading traditional organization’s layout through an all-inclusive standpoint (such as the abovementioned service science, management and engineering [67]; open system theory [68]; network theory [25,26]) viable system approach discussed in the next paragraph, seems to be the most appropriate for two reasons. On the one hand, the theory is among the first to advance all-embracing optics mediating between reductionism (organization’s total closure and transactional conception of boundaries) and holism (organization’s total openness and border’s elimination). On the other hand, VSA specifically describes the kinds of environment in which organizations lie and consequently outlines the gradual emersion of their boundaries.

Therefore, in line with the overview above conducted, which reveals a lack of consensus on the various kinds of selection criteria for establishing corporate boundaries and of a relatively shared classification, the need to adopt an all-embracing approach to the issue emerges. A systemic viewpoint can be useful to define the problem both at a micro-level to identify the single parameters and the stakeholders involved at each stage and at a macro-level to depict a wider framework of firm’s openness degree. In this way, the study seeks to answer the following research question:

Is it possible to identify a new holistic criterion for defining and selecting organizational boundaries in the light of a broader systemic viewpoint considering all the identification parameters as a whole?

Viable System Approach as a Lens for Interpreting Boundaries

In contemporary dynamic markets, organizations should be flexible enough to challenge environmental changes. Thanks to the mediation between a reductionist and a holistic optics, the viable

systems approach (VSA, [69,70]) appears to be adequate for the identification of organizational boundaries. In effect, it not only goes beyond the mere juridical and transactional definition of boundaries (reductionism), but it also does not consider firms as totally boundless. Specifically, VSA studies organization behavior through the analysis of its context and relationships established with sub- and supra-systems in order to survive and to co-evolve [71]. Rather than explicitly formalizing a set of criteria, VSA does not limit organizational openness to outsourcing practices but conceives it as a strategic and upstream necessity for survival. The framework holistically detects the implications of boundaries definition in terms of governance, the existing types of environments and relationships with stakeholders and the most appropriate organizational model for systemic organizations. Particularly, boundaries are not redefined only according to simple commercial agreements. Indeed, after the identification of the structural compatibility with partners (consonance), decision-makers should intentionally regulate the organizational openness degree (resonance) in process through more or less intense relations with stakeholders.

VSA, based on dichotomies, qualifies boundaries by following a parameter based on the structure–system opposition. Even if they constitute a communication filter between the inside and the outside of organizations [72–74] which should be necessarily material in nature, boundaries are changeable or even vanish in the transition of organizations from “static structure” to “dynamic system” [75,76].

From a structural point of view, boundaries are defined by a dividing line between internal and external processes (threats and opportunities). This juridical dimension is intrinsic to the original meaning of boundaries, which inevitably implies a limit between the inside and outside [77] in order to circumscribe the scope of organizations and choose consonant sub-systems.

At the systemic level, instead, structural boundaries progressively loosen, due to the emergence of specific relationships in context from which a new all-inclusive and systemic reality temporarily arises, including and summarizing the original systems. The abovementioned relationships are grounded on resonance, membership, high levels of trust and sharing of guidelines and perspectives among various interacting systems. Nevertheless, too tight relationships could lead to organizational fade-out and to the total removal of boundaries: then, organizations should relate to other systems but at the same time maintain their autonomy.

In parallel to the two levels for the identification of boundaries, it is possible to imagine four types of environment organization experiences in order to establish their boundaries and select their stakeholders: the first one, named “micro-environment”, is internal, whereas the last three, respectively known as “macro-environment”, “meta-environment” and “meso-environment”, are external.

Micro-environment (structural level) defines its institutional and legal boundaries in terms of tangible and intangible resources owned and basic mission espoused. Therefore, it refers to the physical organizational structure containing the ownership structure, the material equipment and the internal human resources, which implement given activities (sub-systems), perform given roles and establish relationships with each other. This structural level can be generally stable and determines the organization perimeter.

However, interpreting the context through the assessment of the only legal borders can be risky, especially in the contemporary market. Hence, organizations should move toward macro-environment, meta-environment and meso-environment (systemic level) in order to qualify supra-systems and choose them on the basis of harmony and resonance in an attempt to create a final system made up of a relationships network.

The macro-environment is the generic environment in which organizations lie, that is the system-country characterized by specific investment modes or by a given amount of spending that indirectly affect the organization. If in a macro-environment the entire banking system can be found, meta-environment, instead, is composed of a set of potential subjects-banks to work with.

Therefore, the meta-level is a preliminary stage in which organizational knowledge about environment increases and in which a skimming among all potential partners is carried out. Between meta-

and meso-environment there is a transactional selection boundary (meso-environment), which allows choosing current partners from the panel of consonant subjects selected in meta-environment through a specific and focused consonance and resonance analysis. Therefore, meso-environment includes the real stakeholders shaping organizational strategic boundaries. Also, the partners identified in meso-environment are not necessarily defined permanently, since in dynamic markets organizations should be able to adapt to environmental modifications and transform themselves based on the changing market needs and development of new technologies.

3. Redesigning Boundaries in a Systemic-Relational Service Perspective

3.1. Systemic Conception of Organizational Boundaries

As discussed within VSA, in the contemporary world, which is constantly changing and is increasingly dominated by a hyper-competition, organizations are typically exposed to a growing need to expand or, at least, redefine their boundaries to better compete in the market [78]. In this regard, also in the light of the dematerialization of organizational activities determined by the progressive success of service-centered logic [79], in the definition of organizations' boundaries it does not seem possible to ignore the relationships among the various interacting actors-systems.

In this regard, Wieland et al. [80] point out that each organization, being a service system, contains heterogeneous entities interacting together to foster the attainment of the pursued objectives. Consistently, Vargo and Lusch [81] compare the organization to the service system, defining it as a relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional logics and mutual value co-creation through service exchange. Therefore the high relevance attached to the relational component within organizations considered in service system perspective emerges. According to Maglio et al. [82], in fact, it is not possible to think about an organization without considering it as a configuration in which a decisive role in co-creating value is played by people, institutions and, more generally, any type of resource. In light of this last statement, the organization can be seen as a service system where value is co-created thanks to all actors' pro-active involvement and an appropriate management of relationships among them.

Likewise, Pellicano and Ciasullo [83] state that thinking about organizations without considering relationships among all actors involved in value co-creation process represents an evident contradiction in terms, since the existence of synergistic relations is at the origin of the emergence and development of any system.

The relational view of organizations, thus, placing itself transversely to VSA, provides an important contribution in bridging the interpretative gap emerged from the previous approaches to the problem of boundaries definition. It is an original observation perspective of organizations [84], characterized by a strong emphasis on the importance of relationships for organizational survival and development in an increasingly turbulent and unpredictable competitive environment [85].

In line with the physiological need to contrast these environmental turbulences, in fact, intra- and inter-organizational relationships are considered both in doctrine and in practice as managerial resources with a high strategic importance [86], since they are able to significantly contribute to the joint creation of value for a solid and defensible competitive advantage over time [87,88].

The relational component, in fact, stimulates and fosters a long-term value co-creation, able to go beyond the short-term opportunistic relationships, toward a change of strategical and organizational mindset [89].

In light of the aforementioned considerations, the importance attached to relationships leads to placing this component in the center of the process aimed at defining organizational boundaries and, therefore, redesigning the business model [23].

To this end, the authors envisage the use of a new interpretive logic to address the definition of organizational boundaries, interpreted as an interactive and changeable process capable of pushing organizations towards a greater awareness of their strategic dimension [50]. Specifically, the adoption

of this approach originates a new type of criterion for defining organizational boundaries, defined as “relational” and described in the next paragraph.

Starting from the belief that relationships are inherent to the concept of system, the relational criterion could be understood as a specification of the systemic view (and as the sum of the logic underlying VSA). Moreover, it could be interpreted as a basis for the creation of today’s organizational structures, which need to formalize the shift from a transactional hierarchical model, based on the definition of only legal boundaries, to an open model of relational organization.

In accordance with the systemic optics herein espoused (acting at macro-, meso-, meta- and micro-level), it can be noticed that organizations need to broaden their boundaries and relate to their external context in order to tackle hyper-competition and internationalization of markets. So, this perspective highlights the relevance of relationships as the key for acquiring material and immaterial resources to ensure a greater competitive advantage. Holistic optics view the relationship as the driving force for establishing corporate borders: this consideration dictates the necessity to intend the relational dimension as the starting point for identifying organizational boundaries.

For this reason, in line with the abovementioned shift from a transactional and materialistic approach to an immaterial and service-centered logic, the need to adopt new interpretative systemic-relational schemes of organization processes emerges. Therefore, the relational criterion can represent a lens to reread contemporary organizational phenomena from a relational point of view, by taking into account the customer’s active role in the organization’s life and reinterpreting governance at the same time.

The systemic-relational perspective aims, on one hand, to understand organizations as changing entities and, on the other, to prevent the overestimation of boundaries dematerialization, which can lead to the conceptualization of virtual organizations. Hence, boundaries exist but are evanescent since, starting from a more or less fixed structure, governance accomplishes frequent structural modifications [90] and ongoing “adjustments” (thus boundaries are variable at the time T), occurring during the interaction with other systems (systemic level). This implies that the (internal or external) stakeholders’ role is not always clear, not being necessarily regulated on the basis of formal agreements, and can depend on the observational perspective.

So, consistent with VSA, the relational vision is halfway between firm’s total closeness and firm’s total openness and consequently between the cooperative (competitor-centered) view, grounded on opportunistic connections of a win–lose type, and a collaborative (partner-centered) view in which cooperation is interpreted as a win–win synergistic exchange of resources [74].

One of the key elements shaping boundaries and determining their flexibility is the relational pattern of organizations. Relationships with stakeholders, in fact, transform themselves and cause the redefinition of boundaries which are not clearly established [91], since systemic organizations are included in an area characterized by a constantly variable perimeter which changes in line with the type of relational strategy established for a given actor and which involves certain resources

Therefore, it is hypothesized that variability of relationships with the different stakeholders contributes to the identification of a different degree of belonging to the system.

In line with the definition of organizational boundaries in systemic viable organizations, in fact, it can be affirmed that evolving boundaries should be redefined in progress during the concrete relationships with other systems (systemic moment) and can disappear depending on the observational perspective.

In particular, the interpretation of organizational boundaries proposed in VSA constantly mediates between the necessity to open corporate borders (in the concrete phase of real systemic exchange) and the need to close these boundaries (at a structural level in which companies should organize and optimize their internal resources). A viable system should lie at an intermediate level between total closure and total flexibility. The opposition of the two levels reflects the transition from a competitor-centered standpoint, grounded on opportunistic connections of win–lose type in which systems relate to each other in searching for utility (so, only on the basis of the establishment of

transactional boundaries), to a partner-centered view in which cooperation is interpreted as a win–win synergistic exchange of resources (strategic boundaries). The first situation is defined competition whereas in the second one firms compete, collaborating and expanding their value chains: the optimum is halfway between the two situations in the development of coopetition [73].

Summarizing the key points of VSA discussed above, as Figure 1 shows, the adoption of a perspective mediating between organization's total openness and total closure leads to the identification of three variables modelling the relational criterion: (1) time; (2) trust degree; (3) communication type and modalities. The synergistic sum of these dimensions determines the nature of relationships in terms of type, intensity and frequency and permits a stakeholder's mapping, useful to select suprasystems and subsystems to establish the kind of resources that organizations should release (in the context) and receive (from the context).

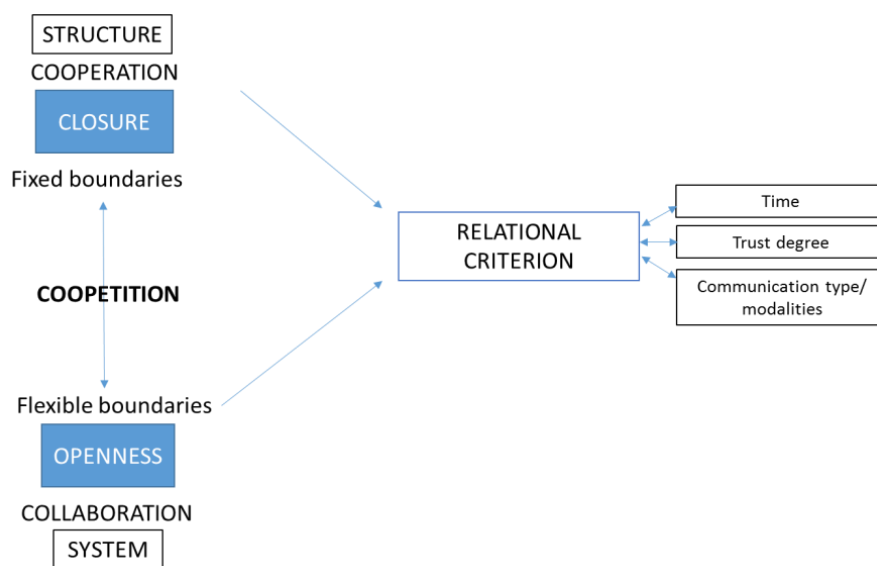


Figure 1. The relational criterion for the definition of organizational boundaries.

Regarding the time variable, it should be specified that, at a macro level and in line with the dichotomy structure-system and with the marketing management dichotomy strategy-tactic, the possible kinds of relationships can be situated in a continuum ranging from short time, tactical and merely opportunistic relationships (T) and stable synergic relationships (ΔT).

The temporality, in turn, essentially depends on two strictly interrelated factors: the degree of trust and the type and intensity of relationships.

Trust, instead, can be defined as a relational shade ensuring that other organizations will not perform an opportunistic and unpredictable behavior, thus reducing context complexity and leading from variability (total uncertainty) to variety (increase in knowledge reducing variability) [75]. Relationships characterized by a low level of trust are purely contractual, whereas if the level of trust is high they are stable and durable and the economic aspect is integrated with the social dimension. In the latter case, two or more organizations interpret value at the same way and make every effort to achieve it in equal measure.

The evolution of trust (which is therefore simultaneous to the shift from short-term to long-term relationship) can also help to understand the evolution of the relationship over time. If, on one hand, trust influences the evolution of relationships, on the other, relationship intensity contributes to trust enhancement.

3.2. The Relational Criterion: From Self-Interest to Synergic Relationships

From the integration of the different level of temporality (occasional/stable) with the trust degree (low, medium or high) and the communication type (strategic/tactical) three kind of relationships—described as follows—can arise. The transition from the first to the third type can gradually lead organizations from a transactional short-term relationship, based on low trust and formal and tactical communication, to long-term communication, characterized by high trust degree and informal, strategic and tactical communication.

The first kind of relational degree herein introduced is the self-interest phase, in which an organization chooses its stakeholders based on economic calculus. At this level, trust is not evaluated yet since the main reason to establish links with other subjects, which are intended as “enemies”, is the marginal utility: the goal of organization is to maximize its profits and acquire bargaining power against suppliers and customers.

In this first phase, communication is sporadic and only the tactical part of marketing management (marketing mix) is activated. In particular, only planned communication tools are adopted in the interactions with others. This phase consists of one-way and two-way communication flows (personal and non-personal) [92] performed by using planned forms of marketing communications and public relations (sponsorship, advertising, sales promotion, personal selling, etc.).

The more relationships grounded on self-interest evolve, the more the knowledge about stakeholders increases and the more trust enhances, gradually leading to the second phase: knowledge-based relationships. At this stage, the progressive awareness on the characteristics of external context and on the nature of stakeholders makes relationships more stable and increases the trust degree toward other actors. Organizations start to take into account the needs of other systems and seek to adapt their operating structure to these demands: exchanges are no longer univocal and go beyond the research of economic profits to the establishment of consonance at a structural level, projecting systems towards future durable relations. There is an equilibrium in the relational weight, since partners are at the same level of importance and influence on each other.

Knowledge-oriented relationships are halfway between meta-level and meso-level, being based on indeterminate consonance to achieve economic benefits but also aimed at establishing collaborative resonance (only at the third step).

Awareness on the environment and on other systems contributes to the reduction of complexity; decision-makers are able to discriminate different stakeholder groups depicting a set of options from the macro-ambient level and put them in the meta-level. Then, current partners are “picked”, whereas the others are “stored” as a “stock” for future. In fact, organizations should be ready to change rapidly and to replace stakeholders in line with external pressures. In this structural “limbo”, connections are prospective (ΔT), being on “standby”, and take place only at a specific time T (meso-level) when they are intentionally activated from governance.

Concerning communication sphere, knowledge-based relationships are characterized by the gradual introduction of a strategic kind of choices, policy decisions, and hybrid category between strategic and tactical level. Communication tools are strategically designed in conformity with stakeholder’s requests, but this integration of organizational goals and other systems’ goals is still restricted to the realization of tactical instruments.

Lastly, the third stage concerns the attainment of synergic relationships, based on the total identification and on the sharing of values with all the stakeholders involved in organization’s life.

Trust evolves from a calculus-based perspective to the complete commonalities of purposes among the different systems, which create harmony and resonance at a systemic level. The various organizations combine themselves in a final system including all the entities, ruled by a common governance arising from the union of the specific value proposition of each member. Relationships are no longer regulated by a “supervisor” system establishing top-down guidelines, but the power is equally distributed among actors.

These collaborative links are based on established consonance to achieve integrated and synergic resonance and are characterized by a high trust degree and a high sense of belonging. At a systemic level, these relationships are centered on a win-win logic and synergistic exchange of immaterial resources [93] in terms of tacit and explicit knowledge, skills and know-how useful to guarantee network survival in the long run. In this partner-centered view, stakeholders are integrated upstream of corporate strategies and each organization in the system shares with the others a common value proposition and orientation towards the realization of co-evolution for gaining reciprocal benefits.

As depicted in Figure 2, there is a correlation between the factors presented in the model. Specifically, time is the variable that seems to mainly affect the trust degree. This circumstance, in fact, occurs in any context, since the availability of time allows actors to establish lasting relations and, accordingly, to achieve a higher level of mutual trust. Of course, this is with the exception of the case in which, over time, there is a problem among the actors: this situation would affect negatively the relationship between them, reducing the trust degree achieved until that moment. However, if on the one hand, the trust degree seems to be affected by temporality, on the other, it is able to exert an influence on the modalities and type of communication among the involved parties. In fact, while the actors among which there is a high trust degree communicate with each other in an informal manner, those ones among which there is a lower trust tend to put in place formal communication processes. In turn, then, the modalities and type of communication among the parties help to determine the type of relationship, which in the transition from an informal to a formal communication tends to take on more and more conceptual connotations linkable to the win-win logic.

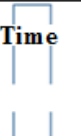
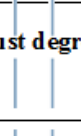

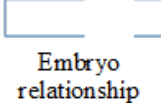
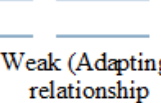
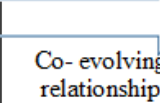
Time 	Self-interest Occasional relationship	Knowledge Evolving relationship	Synergy Stable relationship
	Consonance T		Resonance ΔT
Trust degree 	Low Spontaneity Opportunism	Medium Awareness Collaboration	High Sharing Co-evolution
	Tactic	Strategy/ tactic	Connection of Strategy & tactic
Communication (modalities and type) 	Planned communication	Gradual inclusion of stakeholders in corporate strategy	Planned + non planned communication
	Allocation decisions		Allocation + coordination decisions
Kind of relationship	Marginal utility research	Assessment of stakeholder's needs and goals	Sharing of value propositions and goals with stakeholders
	(Lose- win)	(Lose-win; win-win)	(Win- win)
	 Embryo relationship	 Weak (Adapting) relationship	 Co- evolving relationship

Figure 2. The three kind of relationships emerging by adopting the relational criterion. T: opportunistic relationships; ΔT: stable synergic relationships.

Summarizing, transitioning from self-interest relationships to synergistic relationships it can be noticed that the more relationships are stable, the more trust increases; stakeholders are satisfied both at the T and at the ΔT level and survival and viability of systems are raised. It follows that the three variables discussed above (trust, time and communication) are interrelated and influence each other bidirectionally.

4. Implications and Conclusions

The paper, by attempting to contribute to the increasingly vivid and exciting debate related to organizations understood as service systems [94–96] addresses the focus on the importance recognized to boundaries as decisive strategic variable capable of affecting the chances of competitive success over time.

Furthermore, in line with the gaps emerged from literature and in accordance with VSA assumptions, the work proposes a new framework for rereading organizational boundaries through the adoption of a holistic view, halfway between firm's total openness and total closure. In this way, on one hand, the relational vision herein introduced understands organizations as changing service systems, but on the other hand, it prevents the overestimation of the phenomenon of boundaries dematerialization, which can lead to the conceptualization of virtual organizations.

In particular, to bridge the fragmentation in extant research, a criterion for identifying boundaries at both a micro and macro-level is elaborated, going beyond the traditional opposition between transactional and strategic boundaries. This integrated approach intends relationships as key drivers for long-term value co-creation (abandoning in this way the mere cooperative short-term logic) and fosters the change of mindset, leading to “collaborating competition” (coopetition, [97]) driven by a collaborative and participatory governance [98].

Moreover, this study proposes three parameters (time, trust degree and communication modalities and type) shaping boundaries and giving birth to the relational patterns of organizations. In particular, the more trust, stability and frequency of relationships and of communication increases, the more relationships strength increases, leading to the transition from self-interest-based relationships to knowledge-based and synergistic relationships.

In line with the need to incorporate stakeholders into the elaboration of organization's strategies, relationships should be managed according to a collaborative and resonant view, which aims at achieving the sharing of organizational strategic intent with other systems. Not only communication but also decision-making in general should be planned on the basis of a strategic and stakeholders-oriented approach [99,100], going beyond the solely tactic sphere.

Accordingly, embracing the relational criterion implies that relationships be strategically seen as vital and integrated upstream of organizational strategies, no longer being intended as sporadic tactics. Hence, boundaries are neither fixed nor virtual but change in line with the type of stakeholder and relational strategy established for a given actor.

Overall, the introduction of a model for pinpointing a new criterion not only leads to a possible advancement in literature on organizational boundaries, but also offers some interesting insights in terms of relationship and stakeholder management and generates in this way both conceptual and practical implications.

With respect to theoretical implications, the conceptualization of a new criterion for identifying organizational boundaries enriches the body of management research in general, reducing the above-discussed confusion regarding the kind and the number of existing boundaries and solving this lack by introducing an all-encompassing criterion that entails significant insights for marketing, communication and governance. In addition, the relational perspective allows detaching from a restricted approach overrating the transactional and juridical nature of boundaries but at the same time highlights the need to delimit both physical and strategic borders.

With regard to managerial perspective, instead, the introduced framework can provide managers with the proper interpretative schemes for orienting companies (viewed as systems) towards the

redefinition of their strategies. The proposition of organizational models in line with the current scenario guide companies to elaborate adequate strategies to learn, adapt and develop more and more efficiently in a dynamic environment and to well-balance their inside and outside.

Corporate governance should act as an orchestra leader, by harmonizing the expectations of the various internal and external stakeholders and coordinate them with the requirements of the market. Therefore, its ultimate goal is the harmonic management of value co-creation depending on the collaboration at every organizational level, which in turn enhances competitiveness.

This process seeks to ensure systemic equifinality [76], that is the generation of a final value not equal for everyone, but proportionally redistributed on the basis of the different roles of system members in terms of skills and competences.

In a relational view, systemic organizations should act as strategic relational groups characterized by a reticular configuration in which system is no longer established on the basis of a pre-existent structure, but on the contrary the structure should be flexible enough to adapt to the system.

In these systems, governance should not be established top-down, but on the contrary, decisions should be negotiated bottom-up in a democratic way. Hence, in such aggregated logic, decision-makers should aim to create synergy from interactions with stakeholders and increase knowledge and expertise to raise competitiveness and co-opetition.

Evolving boundaries should be redefined in progress during the concrete relationships with other systems and can disappear depending on the observational perspective: in the interactive phase, sub-systems and supra-systems are “absorbed” by systemic organizations [73–75]. Therefore, even though there are blurred borders, there is a comprehensive entity including the different stakeholders, an absorbing entity, which comprises supra-systems with shared characteristics, for example, suppliers specialized in the production of a given component [101].

Ultimately, viable systems can be defined as “systems of systems” since it is possible to consider organizations as networks of active and ongoing relationships based on the exchange of material and (above all) immaterial resources, emerging from communication flows, and as systems arising from a concentric relational and reticular structure.

Finally, the relational perspective herein proposed identifies skills and competencies, intangible assets to be built “in-use” [102] with other co-creators during real interactions, as an essential lever for value co-creation. In this way, the interactive and systemic moment of exchange becomes crucial to create social and economic value that not only contributes to meet stakeholders’ needs in the short term but that, thanks to the establishment of stable and trustworthy relations, also produces new knowledge for all actors (co-learning) and generates innovation in the long run.

The work shows a series of limitations, which can represent a useful starting point for setting future research. First of all, selecting one particular theory (VSA)—even if its adequacy for the definition of organizational boundaries is widely discussed—to establish the theoretical framework intended to guide the elaboration of the relational criterion can be partial. To resolve this limitation, an integrated framework combining more than one systemic theory centered on service (such as *service-dominant logic* [103] or *service science, management and engineering*, [67]) could be adopted. Secondly, the theoretical nature of the paper can limit the possibility of generalizing the classification of organizational boundaries introduced. For this reason, further studies, such as exploratory qualitative research based on case studies or interviews or quantitative research based on network analysis are needed. These empirical works can investigate a real system of organizations (tourism system, educational system, etc.), aiming at pinpointing concretely the actors involved (supra- and sub-systems), the relational pattern deriving from the interactions with them, and seeking to reconstruct their organizational boundaries.

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for a better understanding of boundaries in a relational systemic perspective. Gennaro Maione dealt with Sections 2.1 and 2.2 relative to the overviews on organizational boundaries and on the introduction of systemic conception for reinterpreting organizational boundaries. Furthermore, the author wrote Section 3.2, concerning the analysis and the description of relational criterion and of the three kind of relationships involved in its adoption. Massimiliano Vesci gave his contribution by modifying the paper according to the reviewers' suggestions. Specifically, he intervened in the introduction and in the conclusions (Sections 1 and 4).

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