Introduction

The boundary issue, which was introduced early on with the inception of interactions, relationships and networks, is a recurrent theme in IMP. Questioning the boundary of the firm as an economic entity served as a touchstone for the early questioning of the extant literature and the subsequent development in IMP (Johanson & Mattsson, 1994).

The basic tenet was formulated roughly as follows: If we give the connection between two firms primary focus and assume that this has at least the same or even higher significance as the firms have in themselves, what descriptions and explanatory devices can we then identify? Moving the boundary of the firm to first include two firms and the interactions between the two, and then, to include a number of interacted firms, proved fruitful and gave us concepts such as the dyadic business relationship, the business network and interactions (Håkansson, 1982; Håkansson & Snehota, 1995). In the attempt to manage in the interactive business landscape, boundary moving and setting concerning resources and activities in relation to others is seen as an essential issue for managers. It implies that connections to others are mutually moveable and negotiable and that these activities continuously reconstruct the units that actually perform the economy. The meaning and purpose of boundary setting seems to go to the core of the interactional processes through which firms learn how to grow and improve their businesses in a complex landscape in which awareness and control is always severely constrained. Boundary setting may be seen as a process of overcoming constraints, in an effort to move beyond what the firm’s resources, activities, actors, control and awareness currently include.

The specific aim of this chapter is threefold. The first aim is to discuss our understanding of boundaries in business and to reflect upon the implications for how we interpret the economy. We also aim to reflect on the effects of this understanding of boundaries on intentional actors engaging to create and appropriate economic value. Third, we aim to discuss how we might move forward by developing additional analytical concepts to address different dimensions of boundary setting activities, such as for control, influence and awareness boundaries. The aim is to develop constructs by which we may further advance empirical research and theorizing.

The boundary issue is part of the IMP genome, and in this chapter, we have taken the opportunity to return to it once more. More than 40 years of IMP research have yielded many insights and considerable knowledge about the consequences of questioning a firm’s boundaries. In this chapter, we discuss the boundary issue given the results of these endeavours. Unlike 40 years ago, we now have the opportunity and advantage of adopting an interactive understanding of the business landscape as a point of departure.
Setting the scene: boundary issues in an interacted business landscape

In business practice as well as in theory, actors and networks are represented by the companies and managers engaged in strategizing and economizing efforts to reach their goals and improve their economic effectiveness. In mainstream economic theory, the boundary of a firm is usually seen as the limits of it as a proprietary unit, and the boundary of management is essentially derived from this understanding of the unit that is to be managed. This provides the image of a clear boundary between the managed firm and the outside. This understanding is strengthened and made visual, judicial and operational by a number of constructs, managerial tools, institutions, and regulations. When interaction and interdependencies between firms and their managers are moved into focus, this image of a clear boundary evaporates, and it becomes obvious that boundaries of firms and managers are in reality multi-dimensional, moveable and contestable in a number of ways. However, a meaningful, purposeful capability to act in business also clearly depends on some sense of clear and fixed boundaries, and the interdependent activities to influence, move and set boundaries thereby become a highly critical issue of second order magnitude to managers. The setting and moving of boundaries must accordingly be seen as a contested, interactional area of critical strategic importance to any firm. The perspective also highlights that firms will have to adjust to boundary setting and moving efforts initiated by other firms and that such moves by others will also occur outside any given firm’s overview and control.

For instance, if we see strategizing in the perspective of the standard SWOT-model, companies and managers perceive particular strengths and weaknesses, opportunities and threats. When addressing these, they recognize that their own resources, capabilities, controls and overviews are severely constrained and that in order to reach strategic goals one often has to try move the boundaries of control, influence and awareness through a variety of different mechanisms and means in relation to other actors. For instance, a manager may choose to develop technologies or supplies internally by executing hierarchical managerial control and overview, or she may choose to outsource these activities by executing buyer control and provide an overview through benchmarking activities rather than through internal hierarchical surveillance. Hence, a manager may strategize across different kinds and dimensions of boundaries in more or less structured combinations, providing more or less flexibility in operations as well as in interacting with others to create value.

IMP recognizes that value creation results from interactions and re-combinations of heterogeneous resources, activities and actors. From a management perspective, the ability to expand value creation by combining has both internal and external aspects. While the external space and variation is substantial, it is also highly constrained in terms of awareness and control. Sometimes, what a manager wants to acquire cannot be found externally. She then has to create what is wanted through internal interactions: organizing activities, as well as mobilizing resources and actors that may grow internal innovation that may serve as the
groundwork of a predominantly integrated corporation. However, management control inside a firm is also always constrained. The boundaries of internal control, influence and awareness will be blurred in many instances. Efforts to move internal managerial boundaries are often important factors behind the flow of strategic re-organizing and economizing initiatives by management in order to reach certain strategic or economic ends.

At other times, the external environment may offer plenty of opportunities to create value through interacting with others – for instance through purchasing. The manager may move control boundaries outwards to enhance influence on the supplier in order to induce the supplying firm to innovate new and better supplies and reduce costs more aggressively. At the same time, she may also expand both internal and external overview and control by integrating buyer and seller computer systems to generate automated analysis of supplier activities and performance. Typically, a manager will combine internal managerial governance and external governance in many ways to enhance the overall ability to create value through combining, to increase awareness and control, and to expand the scope for further strategizing and economizing activities and efforts. A number of IMP studies have demonstrated how suppliers may extend their activities into their customers’ activities, thereby expanding their boundaries of control and awareness in order to improve their own ability to economize in the entire supply chain.

Based on these initial discussions of boundary issues in an interacted business landscape and their implications for intentional business actors, we will now spell out in brief some of the underlying analytical and methodological assumptions and constructs of IMP thinking that shape the foundation for, limitations of, and space for observing and interpreting boundaries of actors and networks. This will provide a basis for completing our discussion of how to possibly move forward to improve our grasp of this complex issue.

Methodological reflections

We propose that concepts such as ‘relationship’, ‘network’ and ‘interaction’, as defined by IMP research, are abstract foundational constructs constituting the irrefutable cores of the scientific paradigm that we call IMP (Lakatos, 1970). These provide the conceptual lenses through which we see the world. Based on the past four decades of research, we furthermore epistemologically purport that IMP thinking is rooted in a process, interactional view of business. In such a view, business evolves as an immensely complex process of micro interactions in real, chronological time in which the creational interactions between humans and the social and physical world are core to what we see as the continuous creation and evolution of the business landscape. In this view, everything is in a flux of change, even though changes may often be slow. At the same time, in a forward-rolling present we reflexively conceptualize and think of things as unitary and lasting entities in continuous time from the past to the future. Even though these things may change in considerable ways, we perceive of them as continuities and wholes, not as flows of unpredictable interacting
micro changes. This is core to how we order, simplify, make sense of, and extract meaning from the immense complexity of the flowing of everything – such as of the complex business landscape.

The appreciation of the flow of time and the fundamental ways that we make sense of and creatively interact with time are important when we want to understand relational interactions. However, it is conceptually difficult to grasp. Each actor gives meaning to the interaction through assessing past and future interpretations of the actors’ intentions relative to others (Hedaa & Törnroos, 2008). However, since we cannot characterize a single episode in the interaction in the flowing of time by directly inferring its meaning from interpretations of things past, it is difficult to find constructive ways to define process directions and process boundaries (Håkansson et al., 2009).

The boundaries we study in business are typically the various manifestations of what has come out of interactional creativity. The actors and the networks we study are those that engage in ordering and constructing things that become valuable to us. Hence, they are always creating and improving things that are changeable, complex, multi-dimensional and variable, and at the same time conceptually unitary. They become unitary in the real world to the extent that they become shaped, conceptualized, categorized, stabilized and shared between us in practice. Conceptual boundaries are the mental linkages and interfaces between what we conceive as units and the flow of activities, events and forces that keeps changing and moving them. Such conceptually created and shared boundaries are extremely useful and productive, although movable and contestable but also necessary for firms and managers to do what they do. Accordingly, we should never underestimate the level of energy and creativity that is being put into efforts to construct, re-construct and move boundaries in the processes of strategizing and economizing in business.

In IMP network analysis, a network is usually seen as containing actors with a variety of interacting objectives, and the idea that a network is identified with one particular intention, is generally rejected (Håkansson & Snehota, 1995). Instead, focus has been on the combined effects and functions of actors, resources and activities as represented in the foundational ARA-model of mutually interacting business networks (Håkansson & Johanson, 1992). Being part of the IMP genome, boundary discussions surface also in this conceptualization. For example, as a consequence of interactions, activities stretch across firm boundaries deep into other actors’ activity structures and continue out in the activity pattern of the network (Dubois, 1994). Resources extend across firms’ proprietary boundaries as well as into the resource constellations of the network (Araujo Dubois & Gadde, 2003; Gadde, 2004).

While questioning the boundaries of activities and resources, the notion of the actor has usually remained unproblematic – in contrast to the early foundational IMP work. The firm, or a business unit of a firm, is often taken as the point of departure as an actor (as for example in the 4R-model: Håkansson & Waluszewski, 2002). As such, the actor dimension is kept more bound, while the activity and resource dimensions have been allowed to become more fluid, permeable and boundary-less. However, conceptually, actors – rather than activities or resources – are the constructs that can create and shape intentions. Through
the clash of actors representing different intentions, the emerging creational interactions generate something representing a negotiated pattern of various intentions connected to the interrelated resources and activities. These are also stabilized through the shaping and design of the activities and connected resources that are mobilized, which thereby become social-material holders of the patterns of intent. In this way, the more relevant ‘actors’ to be moved to the centre of the analysis are not those representing the firm, but rather those representing the particular interacted representation of intentions that has come to shape the given activity patterns and resource constellation. However, without an initial actor, intention cannot be inscribed into either activities or resources. In reality, managers always represent both their firms and such interacted patterns that include other firms. They may have a dual loyalty, which forces effective and innovative companies to provide sufficient autonomy to their managers to engage in and be influenced by these other units of activity on which the firms depend.

Based on these reflections, we can conclude that the idea that boundaries are movable, contestable and multi-dimensional is fundamental to the way IMP research addresses the business landscape. To judge that a boundary is in fact movable, contested and multi-dimensional is thereby not necessarily an empirical discovery, but a justification of the relevancy and potential usefulness of the IMP paradigmatic perspective. Empirical observations are not required to confirm the basic conceptual theory, but to investigate how, in what dimensions and in what forms these battles over boundaries actually happen. First, to develop theories about business practices, these observations are what bring new empirical discoveries to IMP theorizing. Second, these empirical observations should be constrained by and disciplined by the focus on boundaries in interactional settings. To do that, we also need to propose and construct additional methodological concepts that expand the idea of ‘boundary’ to capture what empirical observations tell us they may be made of. The space is still huge for observing, categorizing and theorizing how actors and networks in business engage in complex and sophisticated strategizing and economizing practices that may involve complex combinations of boundary dimensions and forms.

**IMP on intentionality, intentional actors and networks**

“The picture of an actor tied in the numerous strings of a network easily suggests that he is but a lifeless puppet set in motion by others pulling the strings. Yet, looking at how companies work, this is clearly not the case” (Håkansson & Snehota, 1995:201). As recognized in Håkansson (1982), business actors are just as much the result of the outcomes of their relationships with other actors as they are of their own intentions. While business actors are perhaps not as well researched as business relationships, Håkansson and Snehota (1995:197) do recognize the significance of meaningful and purposeful identity construction for the development of intentional collective bonds between actors with interacting activities and resources. This means that actors are actors to the extent that some others acknowledge them as such (Håkansson et al., 2009). Thus, actors in business networks are truly interactive phenomena. The basic argument of the ARA-
model is that because actors are insufficient in themselves; they need to interact with other actors to gain access to resources, actors and activities and to perform more complex business in concert. Essentially, the ARA-model rests on a notion of boundaries and distinctions between actors, activities and resources that is seldom recognized because of its implicit character. The ARA-model treats actors, activities and resources as separate elements in business research – conceptually as well as empirically. However, distinguishing the concept of actor from activities and resources creates some special considerations, since these elements are defined and given meaning only in relation to each other – also in regard to intentionality.

Because actors are seen as multidimensional and complex collectives that may be seen as networks in themselves (for example, seeing a firm as a managerial structure or network), the boundaries of actors become even more multidimensional and complex when we address different levels of agency. Actors may accordingly be seen as ‘collectives’ or as different nexuses of networked nodes, such as of different management roles in the firm, or as different roles of a single manager in relation to different others. The boundaries of these entities may jointly represent combinations of different boundaries across the various dimensions of what we see as “the firm” or “the manager”.

When engaging in strategizing and economizing, managers come to learn or assume that certain combinations of boundaries may be more effective to a firm than other combinations. They also recognize that moving boundaries of activity, control and awareness in relation to other actors may involve conflicts and controversies. It may be costly and it may reduce rather than improve value creation and economic efficiency because it also depends on actions taken by others. Boundaries emerge in such reciprocal interactional relationships. In this way, moving and negotiating along multiple dimensions of boundaries, are typical activities observed at the frontiers of strategic battles between business actors.

In a reciprocal relationship, actors are perceived as having intentions, ambitions and attributes vis-à-vis each other. These form and shape the identities of the actors that give meaning to their roles in relation to one another, as well as to the structures and boundaries of their relationship (Håkansson & Snehota, 1995). Identities are thus mutually shaped through the interactions between actors in a relationship. An important insight from this is that identities in networks are never static, are usually in the making and shaping, and are never controlled by any one actor alone. Identities are the results of many actors interacting at many levels and functions across interacting companies. This mutually influencing process of identity creation is also central to the process of establishing and maintaining lasting and strong actor bonds.

While actors are the products of interactive processes and the bonds that emerge from them, they are not imprisoned by them. Actors in networks are not puppets on a string because actor bonds are always enacted and possible to influence and change, and so are identities. Actors may change their identities by interacting systematically across actor bonds based on a given intention and engaging in what IMP scholars call ‘networking’ (Håkansson & Snehota, 1995:271 ff.; Håkansson et al., 2009:197 ff.). From this it is very clear that the shaping and making of network structure (form) and network identities (content) is inseparable
and that changes in the network structure or form may directly change the identity and meaning content. In a similar way, actors may change or influence the identity and meaning content of another actor by moving or changing the boundaries of its own network structure or form. Structure and content are interdependent and co-evolving (Håkansson & Snehota, 1995). Networking is thus reciprocal and based on some ambition on behalf of different actors who must influence others to move their own intentions into some alignment of the intentions of those others.

**Strategizing and economizing by setting and moving boundaries in business networks**

An actor’s identity and intention reflect her specific situation and influences what connections this actor chooses to activate. It thereby initiates changes in at least some aspect of the boundaries between the actor and her counterparts. Applying the logic of how business relationships function, Håkansson and Snehota (1995) acknowledge that how actors decide what connections to act upon is determined not only by the actor itself but also by factors coming from the counterpart in question as well as from the wider network. Obviously, the intentions of other actors are as important as the intentions of the given actor in determining the direction of action or development. It also determines which connections to activate (Håkansson et al., 2009:265).

In a related discussion, Håkansson and Snehota (1995) use the word ‘cope’ to describe the challenges of a firm in managing the influences from its dyadic business relationships and the surrounding network. Coping with relationships entails exploiting them economically. Coping indicates that actors relate the influences and dynamics from business relationships and networks to some intention. Economizing in networks requires intentional actors performing purpose-directed behaviour.

Deepening the actor dimension of the ARA-model in terms of the role of actor bonds, Håkansson and Snehota (1995:194) continue: “All purpose-directed behavior – acting – requires some framing of the situations by the actor. Intentions and interpretations, the frame of ends and means, are guiding the behavior of actors, collective and individual, despite the obvious limits of their validity.” The frame of ends and means indicates the critical issue here: it has to do with purpose-directed behaviour on behalf of the actors in question – what Håkansson and Snehota (1995:194) call ‘action’. Compared with the notion of a causal texture (Emery & Trist, 1965) between entity and system in systems theory, this notion of action in IMP seems to indicate that there is an idea of some similar causal link between intentionality on behalf of actors and the resulting outcome of negotiated action. However, causality in a network is of a very complex nature and many times unexpected results also occur from interactions, which may create even more complexity and interaction to address. The relationship between intention and action in IMP could be seen as the causal texture between entity and context. However, since it is two-way in nature, this relationship is complicated. Intentions and purpose may guide action, but action also generates intentions (Håkansson & Snehota, 1995:202), and it is ripe with unintended consequences.
This causes IMP scholars to conclude that neither purposes nor identities are given beforehand but are rather parts of a negotiated reality emerging from interactions among many actors with multiple intentions and identities. However, to discuss business behaviour fruitfully and to conceptualize effective behaviour in networks, some form of rationalistic assumptions must be made. This is recognized, for example, by Håkansson and Snehota (1995) in discussing the economy of business relationships. We need some norms of rationality (Thompson, 1967), however weak, in order to conceive of intentional action and agency in networks. This is also fundamental for our understanding of economizing in networks. Håkansson and Snehota (1995:395) refer to such an agency as the ‘effective network actor’.

For the purposes of further conceptual development and understanding the boundaries of actors and networks, we propose that the idea of the effective network actor is fundamental to our discussion. The effective network actor is an actor that strategizes and economizes in networks. This brings us into additional discussions of forms of boundaries as well as of ways that IMP research has tried to conceptualize how we might analyse and talk about setting and moving boundaries.

Some IMP scholars touch on the notion of boundaries for conceptualizing the organization between dyads and networks in business (Cova, Prévot, & Spencer, 2010), arguing that some conceptualizations provide clearer boundaries than others. Geiger and Finch (2009) discuss boundaries as market shaping issues, suggesting how boundaries will never become completely specified in business exchange. They will instead cluster around a set of objects (typically products or services), around which the exchange actors will cluster their related objects allowing for forming, organizing and performing the exchange. Since the qualities of the material and relational dimensions of exchange are ever changing, boundaries are fluid and contested – especially as they become obvious to others (Geiger & Finch, 2009). This also implies an understanding of boundaries as proliferating due to the course of exchange.

Azimont and Araujo (2007) discuss boundaries as related to market or network norms and conventions, arguing that firms try to influence the perception of others, which is related to how a firm defines and understands the boundaries of their exchange and relationships. As such, boundaries are seen as having multiple dimensions involving past and collective investments. Accordingly, persuading others to change boundaries, requires a sense of timing, ability to mobilize facts, data and forecasts related to mutual exchanges as well as what is termed a ‘calculative apparatus’ (Azimont & Araujo, 2007).

However, to engage in a more nuanced and detailed discussion of the notion of boundaries and their implications for the intentional, strategizing and economizing actor – the effective network actor – we will now place specific focus on the work of Gadde (2013, 2014). Our choice rests in Gadde’s specific focus on strategizing across firm boundaries, which resonates well with our focus on different activity patterns and resource constellation of effective network actors and networks. Gadde’s (2013; 2014) analysis of strategizing at the boundaries of firms, distinguishes between strategizing in two different forms of corporations that operate in different activity patterns and resource constellations: the ‘integrated hierarchy’
and the ‘connected company’ as will be discussed in more detail in the following sections. We will also pick up on Gadde’s work on issues of control, influence and awareness as different dimensions of boundaries of firms, networked activity patterns and resource constellations.

**Understanding setting and moving boundaries**

Gadde (2014) argues that boundaries are strategic because they concern firm-specific and firm-addressable resources and thus affects the inter-firm negotiations and bargaining power of the effective network actor. In essence, Gadde’s work concerns the ability to move boundaries as a mean for building effectiveness and innovation. Accordingly, in reflecting on the effective network actors’ ability to move and influence boundaries for strategizing or economizing, it is necessary to discuss the notion of boundaries in more detail. We start by discussing Gadde’s development of two boundary-setting archetypes.

**Two archetypes of boundary settings**

To structure his analysis of boundaries in networks, Gadde (2014) introduces two archetypes: the integrated hierarchy and the connected company. Historically and empirically these archetypes reside side by side in single firms but with various prevalence across different periods of time.

*Table 1: Central features of boundaries in integrated hierarchies and connected companies (Gadde, 2014:58)*

<table>
<thead>
<tr>
<th>Type of firm</th>
<th>The integrated hierarchy</th>
<th>The connected company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic strategy</td>
<td>Buffering</td>
<td>Bridging</td>
</tr>
<tr>
<td>Boundary movement</td>
<td>Widening</td>
<td>Narrowing</td>
</tr>
<tr>
<td>Interdependencies and</td>
<td>Strong internal interdependencies.</td>
<td>Substantial Interdependencies cross</td>
</tr>
<tr>
<td>boundaries</td>
<td>Weak in relation to the outside</td>
<td>ownership boundaries</td>
</tr>
<tr>
<td>Interfaces and boundaries</td>
<td>Limited interfaces to the resources of</td>
<td>Mutual adaptations provide joint</td>
</tr>
<tr>
<td></td>
<td>others. One-sided adaptations.</td>
<td>interfaces with business partners.</td>
</tr>
<tr>
<td>Interaction and boundaries</td>
<td>Buffering constrains the interaction with</td>
<td>Intense and frequent interaction in</td>
</tr>
<tr>
<td></td>
<td>external actors</td>
<td>long-term business relationships</td>
</tr>
<tr>
<td>Impact of the influence</td>
<td>Internalising solves the problems with</td>
<td>Interaction with partners provides</td>
</tr>
<tr>
<td>boundary</td>
<td>influencing others.</td>
<td>opportunities for influencing others.</td>
</tr>
<tr>
<td>Impact of the awareness</td>
<td>Limited awareness of what is on-going</td>
<td>Knowledge sharing with partners widens</td>
</tr>
<tr>
<td>boundary</td>
<td>outside the hierarchy.</td>
<td>the awareness boundary</td>
</tr>
</tbody>
</table>

The integrated hierarchy represents the accumulation of resources and the coordination of activities inside the single firm to build effectiveness and to innovate. The model is one of vertical integration and is exemplified by historical firms such as General Electric and Ford. These firms initially developed as connected corporations by basing their business on known technologies and components, combined in new ways. However, over time, and due to their own internal electricity system and radical car design
innovations, they found that the technologies they needed from external suppliers were not available. They had to innovate everything themselves. The integrated hierarchy form of General Electric and Ford developed in response. For instance, Ford had to develop technologically advanced machinery and tools to effectively assemble cars that deviated radically from the existing and broadly distributed technology that had gradually been adopted and transformed from horse carriages. The development in the use of technology and internal integration provided a basis for a business recipe of much more effective and efficient production through internal innovation, production and assembly. As illustrated in table 1, Gadde characterizes the integrated hierarchy as having strong internal interdependencies and weak relations and interfaces to the outside. In this case, the boundaries of the firm were widened through expanding the internal activities of the firm to include activities previously done by external suppliers.

The archetype of the connected company form is often associated with outsourcing but can be identified in business history long before the early history of General Electric and Ford. The basis for this model is that relevant innovations have emerged outside the firm that requires the firm to engage externally and to purchase these innovations from others to combine them with internal resources and designs. The connected company is a result of a relative narrowing of boundaries in movements that ‘shrink’ the firm and at the same time expand its interactions with others. Consequently, this model is characterized by substantial interdependencies crossing ownership boundaries. By focusing on a limited range of activities and resources, the connected firm gains from specializing in production and development, for example, thereby calling for additional connections to other specialized firms. It also relates to the availability of relevant and competent suppliers externally due to innovations outside the focal firm – innovations that it wants to integrate with and exploit. The synchronization of material flows is also important to the connected company but has different characteristics compared to the integrated hierarchy. Here, flows need to be handled in interaction. Depending on the specific industry and context, the firm will experience variations in intensity and frequency of interaction in different relationships. In the connected company model, dependence on others is a prerequisite for exploring benefits of adjustments and adaptations across ownership boundaries, thus favouring boundary narrowing.

Characteristics of boundary setting: location and permeability

According to Gadde (2014:53), when moving boundaries for strategizing or economizing, the effective network actor needs to pay attention to both the location and permeability of boundaries. The location of a boundary does not only relate to ownership; location also relates to the network layers of activities, resources and actors. Each of these layers offers a perspective of what to perceive as relevant boundaries (as also addressed by Araujo et al., 2003).

The characteristics of boundary location are not only connected to ownership, but also, for example, to the resource heterogeneity resulting from processes of value creation emanating from (re)combinations of
resources. Related to the previous discussions of the ARA-model, the effective network actor needs to develop abilities to effectively combine resources and their interfaces with those of others. The characteristics of location are thereby related to activity configurations. This calls for a broader understanding of boundaries of ownership and control that also includes the interdependencies that emerge through inter-firm coordination and synchronization of activities (Gadde 2014; Dubois 1994).

Inspired by the work of Thompson (1967), Gadde (2014:53) suggests that the effective network actors’ perceptions of a boundary, for instance as either a ‘buffer’ or ‘bridge’, will affect the permeability of the boundary. The permeability of a boundary relates to the actors’ perceptions and the nature of the activity and resource connections between firms. Thus, the notion of boundary permeability offers insights to the particular characteristics of activity coordination and resource combinations in relationships. When an activity or resource boundary is utilized as a buffer, it means that the effective network actor is integrating its own activities and resources, leading to low permeability. Using a boundary as a bridge implies building more openness and collaboration, leading to high permeability, thus increasing the connectivity to others. The notion of permeability represents an important difference between the two archetype forms.

What an effective network actor knows about the activities and resources of others in the network constitutes its ‘awareness’ boundary. The awareness boundary is termed the ‘extended border’ of the firm (Dubois 1998). Constituting the basis for interaction, the awareness boundary can be expanded or changed. Related to this, an effective network actors’ ‘influence’ boundary characterizes the extent to which such an actor may exercise influence over the activities and resources of others (Dubois, 1998).

Summing up, the notions of widening and narrowing of boundaries relate to the strategizing and economizing of the effective network actor. In their pure forms, the integrated hierarchy and the connected company archetypes, as presented by Gadde (2014), lead to an either/or scenario. However, in everyday life of firms, the widening and narrowing of boundaries can relate to additional issues apart from simple ownership, and for most firms narrowing and widening of boundaries are equally relevant issues for management.

**Extending conceptions of boundaries of actors and networks**

In this chapter, we have noted how the IMP perspective sees boundaries of firms as moveable and contested frontiers of interactions between effective network actors, which leads us to view such boundaries as being at the core of strategizing and economizing dynamics. Development of theories of boundaries prompts us to expand our understanding of how this works in reality. In our reflections on the methodological underpinnings of the approach, we acknowledged that effective network actors interact based on their different intentions. The outcomes are creational processes through which the constant flows of events and interactions influence our conceptions of the entities we essentially see as unitary and continuous across time, such as firms. Such units may also be seen as stretching into one another – for instance to
expand influence, overview and control into the domains of other firms. An expanded theory of boundaries also invites explorations into different dimensions of boundaries, such as of judicial, awareness, influence and impact boundaries.

**Strategizing by setting, widening or narrowing boundaries**

A re-occurring issue in our discussion has been the need to clarify the relationship between the ability to strategize and economize in an interacted landscape in relation to efforts to set and move the boundaries of the acting entities. How does our understanding of the character, form and content of such boundaries affect our ability to expand knowledge of the networked business economy? Effective network actors that can somehow move certain dimensions of their boundaries to be aware of, understand and control more of the mechanisms that direct how utility, costs, revenues, risks and responsibilities are being distributed and managed among interacting actors, are more likely to be able to expand, to appropriate the gains and avoid the losses from business operations. This is what economizing in networks entails: to manage boundaries to produce a distribution of costs, risks and revenues that is as economically attractive as possible for the given effective network actor. Because this holds for all the effective network actors involved, it is easy to see how and why the moving of different dimensions of boundaries is such an important part of business strategies. It is also easy to see how this may constantly be driving towards more complex, interrelated and sophisticated interaction patterns, as well as towards more effective and extended managerial control technologies and more layers of networked coordination. These efforts and battles seem to drive the expansion of the networked economy – crowing out or dominating the entities that are less able to set and move their boundaries in relation to others.

In interactions between effective network actors, clashes between actors with different intentions will occur. Those clashes – with more or less intense conflict – will typically relate to the content of the boundaries in terms of coordinating activities, combining resources and building actor bonds. As such, the activities and resources forming boundaries can be promotors, preventers, or defenders of certain intentions – thus becoming boundaries themselves as representations of previously settled conflicts over particular intentions.

Setting and moving boundaries by some actor or network may also have effects other than the intended, and may completely ignore, for example, third parties in the network affected by the move. This will cause reactions and counter-moves that generate mobilization of interactive processes in which boundaries are contested, moved, and may become considerably more complex and blurred over time.

Whereas various studies related to IMP research inform us on the character of boundaries as discussed in this chapter, we will argue that the understanding of boundaries is still somewhat of a black box that must be opened up and expanded in specific detail. In particular, we found that a useful, illustrative point of departure is represented by Gadde (2013; 2014), who uses the concept of widening and narrowing firm
boundaries to analyse two opposing corporate models in terms of how and why they have set their own boundaries. He furthermore elaborates on how these may have consequences of awareness and influence boundaries over time—particularly with respect to the dynamics of innovation in relation to the boundary architecture of the two corporate models. He also discusses the importance of boundary permeability in a dynamic business landscape. In the following, we will suggest and discuss three possible extensions of Gadde’s (2014) discussion.

**The intentional firm or the intentional constellations of actors/networks as units of analysis**

The first additional issue we would like to propose relates to Gadde’s (2014) identification of the effective network actor with the firm. He illustrates how the firm may cast a boundary narrower or wider as part of coordinating activities and combing resources, and how it may use the boundary as a buffer or bridge as a way to control the permeability of the boundary.

However, turning to the work of La Rocca (2013), it seems relevant to question whether we indeed need to study notions of actors more specifically to understand boundaries in more depth. La Rocca (2013) summarizes three characteristics of the actor entity as discussed in IMP research. First, the actor entity is not simply given by the properties of an individual or an organization but is viewed as a collection of material and immaterial resources defined by the set of features that makes a difference to a specific counterpart in a given context. We contend that this can be extended and complemented by a view of an intentional actor as any actor-entity in a network. For example, a sub-section of a network composed of business units with a shared purpose or vision may first cast a boundary around them and create a ‘meta-actor’ that may be endowed with intentionality on its own. This may be analysed as a unified actor whose defining objective is to shape and develop a functional unity to pursue its intentions, as distinct from other entities. Then, this meta-actor—or collective of actors—may begin widening or narrowing its boundary according to the logic of Gadde (2014). Thus, the effective network actor comes in many forms and shapes.

Second, La Rocca points to the actor entity being relationship- or context-specific, which means that the identity of a business actor will vary from relationship to relationship. The narrowing of boundary initiatives set by different customers may cause various effects on the identity of the firm, for example, as the boundaries influence production and purchasing activities. One customer’s narrowing of boundaries may lead to widening of the firm’s activities towards own suppliers, while in other relationships it may lead to additional narrowing of boundaries as activities are coordinated in new ways. This multiplicity effect on an effective network actor’s identity provides business opportunities but inevitably also clashes between the actor’s own intentions for setting and moving boundaries vis-à-vis specific others.

Third, the actor entity is repeatedly re-defined by other actors, their expectations and situational conditions. This makes the boundaries of the effective network actor fuzzy and continuously re-enacted (La
Rocca, 2013), which has major implications for our understanding of boundary setting and moving as fluid and contested – especially as they become more obvious to others than the directly related actors (Geiger & Finch, 2009). This resonates with the epistemological process view inherent to IMP, as we argue that expectations of future intentions also affects the present understanding and enactment of moving and setting boundaries.

We agree with Geiger and Finch (2009) who claim that understanding and working with boundaries in a networking perspective is not only about ‘tools’ and ‘training’ to individual managers. Effective network actors are those intentional functional unities that are skilled in the art of economizing and in managing boundaries in this way. This includes understanding and managing the boundaries of costly, crucial and technologically advanced activities as well as managing the boundaries of equally costly, crucial and technologically advanced resources. The result of such actors’ endeavours is some concentration of profits and wealth at particular nodes in a network, i.e., at the effective network actors who are the intentional functional unities. This profit and wealth accumulation is the ultimate goal and driving force for effective network actors. Future research could uncover more of the characteristics of such actors, their many forms and shapes, as well as the mechanisms behind wealth and profit accumulation in networks by these actors. We have speculated that the distribution mechanisms are important, but there may be others and combinations of mechanisms can prove extremely useful and powerful. However, these are empirical topics in need of additional research.

The collective dimension of setting boundaries

The second conclusion based on the analysis and discussions of the chapter is how any intentional actor, when narrowing and/or widening boundaries, inevitably faces resistance and counter initiatives from other intentional actors with different intentions, ideas and efforts to move boundaries. In other words, no single effective network actor – whether individual, group, function or collection of firms – is ever in complete control of the boundary.

The level of influence from counter initiatives is determined by the nature of interaction, power asymmetry, etc. between actors. Since our discussion of boundaries is based on the notion of effective network actors, we add the feature of opposing boundaries to the discussion as a type of boundary that arises as a result of the influence of counterparts. Hence, the coordination of activities building the activity pattern of the network and the related constellation of resources become carriers of intentions forming additional boundaries in business interaction, strengthening or even resolving others. In this way, other intentional units use the boundaries as bridges. For the first intentional unit, these bridges become channels for influence and impact. We argue that boundaries from the view of an opposing intentional unit can be used as channels for influence but also analogously as restrictors of influence. The latter is common in technological development in situations where one actor seeks to protect core business knowledge or business critical
technologies from other intentional units. We propose that Gadde’s (2014) notions of buffering and bridging be complemented with those of channelling and restricting, which are the inverted intentional uses of boundaries from the point of view of an opposing effective network actor. The core learning is that although effective network actors may attempt to narrow or widen a boundary, no single actor is ever in complete control of the boundary. It is always a question of contestation, opposition, resistance, concession and even chance.

The multidimensional conception of boundaries: awareness, influence and control

The third and final theoretical conclusion to be extracted from our discussion is to appreciate that boundaries are multi-dimensional and complex and can be analysed directly in relation to our understanding of actors and networks as multi-dimensional and complex. We would even argue that this multidimensionality and complexity can be conceptualized as unified analytical wholes; as a ‘strategic and economic boundary’ that is composed of combinations of boundaries that refer to multidimensional activities and resources of different aspects of management, policy and research. Each of these may be focused and analysed both separately and in relation to others.

One of these dimensions is the boundary of awareness. An effective network actor may widen her awareness boundary by engaging at the more distant parts of her network in relations that permit the actor to see further, to expand overview of relevant events and see what may emerge from beyond the horizon of her locally focused activities. Such engagement also expands her visibility to others – and thereby the possibility that others may discover and initiate potentially interesting business relationships. This is what occurs when actors attend international conferences and fairs or promote themselves through broadly oriented presentations in a variety of channels. An activity such as branding is clearly a way that effective network actors work to move and influence the awareness boundary of themselves.

Another dimension is the boundary of control. To expand its domain of and means of control in relation to others, such as suppliers, customers, politicians or government bodies, is obviously at the very core of an effective network actor’s strategizing and economizing activities. To have control over others implies, in a strict sense, to control sufficient means to force others to comply by disregarding their own will. In this case, the power of management within the boundaries of a firm’s property is obviously expanded to include more actors, activities and resources. On the other hand, to be controlled by others implies the opposite, that the boundary of managerial control is narrower than what is formally given in terms of unified ownership to a firm.

A third aspect between these two dimensions of boundaries of actors and networks is the boundary of influence and impact. As indicated above, the ability to influence external actors and networks is a core concern in strategizing and economizing activities, as is the ability to adjust to the influence of others. However, also internally in the firm, the ability of managers to influence is bounded and usually involves
complex patterns of alliances and opponents, subordination, coordination and directions given from above. For managers to be able to move boundaries of influence and to adjust to the influence of others, is critical to taking part in the management of a collective thing, such as a firm or any other form of effective network actor.

In any given process of strategizing and economizing, actors and networks will engage efforts in all of these dimensions to combine strategic and economic actions, resources and actors in complex, interdependent ways in an attempt to move their activities in the direction they aim for. The complex and dynamic business landscape requires balanced, complex actor and network managerial practices.

**Concluding reflections**

In concluding this discussion on boundaries of actors and networks, what strikes us is that by moving the perspective away from the firm and the manager as given, contained units, towards a focus on their interactions, we move towards a much more realistic but also much more complex understanding of the business landscape. In the end, any theory must be based on extractions from the complex ever-changing processes of the business landscape. These extractions need to be both consistent with reality and simplified in order to be communicated, understood and shared among business researchers. When moving away from what everybody sees as unified, simplified wholes, towards re-opening into the dynamic complexities of actor and network business interactions, we become easily overwhelmed. The number of interesting and relevant dimensions rapidly expands, and every one of them seems to have both an active component of acting upon others and a passive component of being acted upon. Boundaries in interactive settings may refer to all of these dimensions in both their active and passive forms.

We also recognize from our discussions above that actors and networks in business settings seem to be constantly struggling to overcome some fundamental boundaries. One of these boundaries is ignorance and lack of overview, and we suggest that one of the core features that favour more networked business practices over less is that networked interaction is a way to minimize the negative consequences of this fundamental constraint. The other very fundamental boundary is that of limited control. The consequence of recognizing that control is always bounded and that profitability and control in many cases may be closely related, is that organizing alliances able to perform effectively, as mutually re-enforcing of multiple interacting networked processes, may easily over time, outperform the less interactive actors. Collaborating networks of this kind may develop positive synergies that others do not.

We suggest that to advance theory and methodology in this domain, we need to create analytical constructs that separate between different idealized ways in which control, influence and awareness are executed, for instance, and then discuss what widening, narrowing or opposing entities actually mean in relation to the awareness, influence and control by networked actors. What does it mean to widen or restrict a boundary of influence and awareness in relation to the internal hierarchical management network? What
economic and strategic elements may refer to this? What does it mean in relation to a specific actor-role such as a purchaser, an inventor or others?

In the end, the expansion of methodological constructs that we have discussed here will probably only be helpful to research when applied to concrete efforts to investigate particular problems and particular contexts. In those cases, they may offer help to recognize the complexity of the matter and lay out the alternative dimensions and concepts; from these, researchers can choose those that may be productive to their own study.

References to Chapter 11 (Munksgaard, Olsen & Prenkert)


