

Understanding organizational boundaries

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Abstract: This article investigates various conceptualizations of organizational boundaries and seeks to establish a point of departure for the *Globe* special issue: Crossing organizational boundaries. It reviews literature that has paid attention to organizational boundaries in their own right and presents and discusses various definitions and categorizations of these boundaries. Because of the special issue's concentration on the *crossing* of organizational boundaries, two concepts that have been particularly helpful for the understanding of cross-boundary interactions are discussed as well: the notion of *boundary spanning* implying the ability of maintaining and facilitating relations between distinct organizational entities and the concept of the *boundary object*, originally defined as a conceptual response to the challenge of understanding inter-organizational collaboration in practice. The notion of the boundary object has been a useful conceptual instrument for researchers studying the successful collaboration of actors with differing understandings of and interests in the subject of collaboration. In the article's final section, the different contributions to the special issue are presented.

Keywords: boundary concepts, boundary spanning, boundary objects, organizational boundaries

1. Background

Today, both individuals and organizations need to handle changing organizational boundaries. The ability to cross disciplinary, professional, and cultural boundaries and collaborate in interdisciplinary and inter-professional teams is in high demand. "The appropriate individual" (Alvesson & Willmott 2002) is flexible and adaptable, and first of all on the move, with an appetite for new challenges, new experiences, and whatever else might be beyond the boundary of the known routine. Mirroring this emphasis on getting beyond boundaries is the larger part of recent literature on organizational boundaries in management and organization studies: most contributions address processes that go 'beyond' and 'across' boundaries (e.g. Coun et al. 2019; Dee & Leisyte 2017; Dick et al. 2017).

Considerably fewer contributions have addressed organizational boundaries in their own right. Arguments for investigating boundaries in their own right include that boundaries take multiple forms, have a broad variety of functions, and are established, maintained, and dissolved in a myriad of different ways (Vakkayil 2012). As Hernes (2004) explains "boundaries are composite", implicating that multiple forms of boundaries coexist in the organization. Some boundaries are ephemeral, fluid, and invisible; some are tangible and reified in regulations, documents and structural arrangements. Given their complex nature and their complex interplay with organizational processes, boundaries must be studied as they are experienced and made sense of by members of organizations. In his call for complexity-embracing theorizing in organizational studies, Tsoukas (2017) reminds the reader of the axiom of "understanding backwards – living forward" characterizing the divide between the researcher's and the practitioner's stance. Advancing theory-building that allows for organizational complexity to be recognized and theoretically understood narrows this divide. "Understanding backwards and living forward" is indeed a meaningful approach to the study of organizational boundaries. Organizational boundaries are created, maintained, respected or contested, crossed or broken down by organizational members acting in a living forward mode. The resulting boundaries frame future practice and organizational members' understanding of the organization's past and present. Tsoukas' call for complexifying research urges us to observe individual actors' role

in organizational processes (both in organizational change and in maintenance of routines). For organizational boundaries, this implies studying how individuals communicatively perform boundaries, and how they individually and collectively are inscribed and involved in organizational boundary-making. Furthermore, boundaries are not peripheral but intrinsic to organizing (Hernes 2004; Vakkayil 2012). As argued by Barth (1969), the existence of boundaries is not to be understood as a trivial corollary of the essence of a group (or an organization), the boundary is what defines the group vis-à-vis other groups – and also vis-à-vis internal diversity: “The critical point of investigation [...] becomes the ethnic boundary that defines the group, not the cultural stuff that it encloses” (Barth 1969: 15).

The contested nature of boundaries has been investigated in previous studies (e.g. Lamont & Molnar 2002). In the study of concrete organizations or of inter or intra-organization collaboration, boundaries and their meaning to organizational actors can rarely be determined on beforehand but need to be subject to empirical investigation (Garsten & Nyqvist 2013). This special issue takes as its point of departure that one of the contexts in which the polymorphous character of organizational boundaries can be studied is in the context of communicative practice. Thus, this special issue takes an interest in the *communicative* activation of organizational boundaries. Such an approach enables the recognition of how diverse forms of organizational boundaries emerge, intersect, and overlap as organizational members address boundaries directly or indirectly in communication with each other or with outsiders (such as researchers).

The communicative activation of boundaries may serve the purpose of crossing or removing boundaries. But when it does, it still constructs specific boundaries as real and consequential. That organizational hierarchies have become flatter, and the formal boundaries around positions and roles more blurred and fluid does not mean that boundaries disappear. One example illustrating this is Van Laer and Janssens’ exploration of “subtle discrimination” in the workplace (Van Laer & Janssens 2011). While blatant discrimination erects visible boundaries (such as non-employment of ethnic minorities), subtle discrimination combines empowerment and disempowerment and seems to cross boundaries while at the same time keeps the boundaries around majority privilege in place: “in a world in which the blunt force of open discrimination is often no longer accepted, subtle discrimination can be seen as a more sophisticated tool to maintain the powerful position of the majority and to *fix the barriers* preventing a new generation of skilled and educated minorities to escape their weak positions.” (Van Laer & Janssens 2011: 1220). Formally, boundaries around ethnic majority privilege are perforated (e.g. through diversity policies); informally they are kept in place. It often takes the sensitive ear of the affected, such as minority employees, to detect and understand the subtle implications of this form of boundary communication. Concepts such as subtle discrimination illustrate the complex political and social nature of organizational boundaries and their intricate and ambiguous realization in communication. Thus, how boundaries emerge in communication needs to be studied in concrete contexts. This is the purpose of this special issue.

2. Conceptualizing organizational boundaries

Even advocates of the boundaryless organization realize that “Organizations have always had and will continue to have boundaries” (Ashkenas et al. 2008: 184). For some management scholars, this realization encourages questions relating to the link between boundaries and economic performance: which boundaries contribute to positive identification with the organization, to effective customer service, and to rational decision-making – and, on the other hand, which boundaries lead to a stifling of organizational processes and a misalignment with the fast-moving, globalized world outside the organization’s boundaries? How many boundaries should an organization have (e.g. between layers of management), where should the boundaries be placed, and how permeable should they be?

For scholars more broadly interested in organizational processes, seeing organizations and boundaries as inseparable and mutually constituting entities inspires an interest in the link between

boundaries and the meaning that individuals and organizations ascribe to them. Arguably, an in-depth and nuanced understanding of relations between an organization and its members, of organizational changes, and of individual and organizational aspirations can be obtained by focusing on boundaries. How organizational members communicate boundaries reflects professional and organizational identification (including identity dilemmas and conflicts), but boundary communication also sets the scene for collaboration within and across boundaries. Are boundaries communicated as impermeable and rigid? As creating unnecessary hindrances for development and cooperation? Or as a group's hard-won victory in the struggle for status and recognition?

Understanding boundaries starts with the realization that the notion of organizational boundary has multiple meanings. Most scholars operating with the notion of organizational boundaries agree on a distinction between visible, formal boundaries on the one hand and invisible, imagined boundaries on the other. For example, Santos and Eisenhardt (2005) distinguish between *efficiency*, *power*, *competence*, and *identity* boundaries. Only the efficiency boundaries have a formal/legal existence and a physical/visible manifestation (e.g. in the form of physical buildings and legal documents). Large portions of organizational change happen at the intersection of these two types of boundaries and can be understood as a struggle for better alignment between the organization's formal legal boundaries and imaginations of "who we are" and "who we want to be". Likewise, organizational changes such as a flattening of hierarchies, centralization or decentralization, and even the introduction of the so-called boundary-less organization take place as a rearrangement of boundaries, not a removal of them. Consequently, scholars contributing to this special issue have followed the direction suggested by Barth (1969) and paid more attention to the organizational boundaries themselves than to the "stuff" that they enclose. Consequently, the focus of the following discussion is on literature that directly and explicitly has sought to contribute to a theoretical unfolding and underpinning of the notion of organizational boundary.

2.1 Categorizing and characterizing organizational boundaries

Lamont and Molnár (2002) and Lamont, Pendergrass and Pachucki (2015) review multiple contributors to the understanding of social boundaries, ranging from Durkheim and Weber to present-day scholars investigating the production of difference and inequality in today's globalized and multicultural societies. These authors take a broad approach to the study of boundaries and include social processes that lead to the production of boundaries, the boundaries themselves, and the resulting social identities and distinctions. Through this approach, several scholars become boundary thinkers. For example, Marx because he studied the relation between the working class and the capitalist class; Weber because he explained the mechanisms of status differentiation; Bourdieu because of his contribution to an understanding of the multiple systems leading to the production of differences in habitus and distribution of various forms of capital. Although these contributions and others are invaluable for an understanding of social and economic processes involving the production of boundaries, this broad view may, however, complicate a precise understanding of the boundary phenomenon itself. Concrete, perhaps naïve but potentially useful questions such as: what is the nature of the boundary, what does it look like, how is the boundary experienced, for example when "trespassing", and what precisely does it take to uphold the boundary? may remain unanswered. At the micro-level, such questions are highly salient to organizational members in their attempts to question or maintain boundaries. For example for women trying to get through the glass ceiling to the upper echelons of a male-dominated management, knowing the precise procedures, discourses, and formal and informal practices that constitute such an invisible boundary is highly useful as a point of departure for action. Thus, in the following, the focus will be on scholars whose primary interest is in organizational boundaries in their own right.

In his analysis of bureaucracy Weber (1922/2013) provides a clear answer to the question: what constitutes organizational boundaries? Boundaries in the bureaucratic organization consist of formal,

legal, written rules. Such rule-based boundaries circumscribe each office and the duties of each officeholder. Importantly, legal boundaries also establish the organization as an independent entity and separate its functioning and its economy from that of the private household. Obviously, rule-based boundaries still define organizations, although many scholars pay more attention to non-formalized boundaries, for example symbolic (Lamont et al. 2015), social (Lamont & Molnár 2002) and identity boundaries (Santos & Eisenhardt 2005). Santos and Eisenhardt (2005) also address legal boundaries but focus on the nature of these boundaries in terms of *efficiency*. From a business economic perspective, organizations seek to place the legal boundaries (reflecting ownership or non-ownership) efficiently. Thus, the exact location of organizational boundaries often reflects an organization's decisions on whether it is profitable and cost-efficient to hold certain resources within the organization or to rely on external actors for the completion of certain tasks (Vakkayil 2012).

Hernes (2004) categorizes legal boundaries as a subcategory of *physical boundaries*. Referring to boundary functions as *ordering* organizational life, as *defining* the organization as distinct from other organizations, and finally as *regulating* traffic across an organization's "internal and external spheres", Hernes argues that formal/legal rules "regulate the work of members", they "set the organization apart from other groups or organizations" and they may allow or "hinder the recruitment of outsiders" (Hernes 2004: 13). Whereas the definition of an organization as a legal entity would seem to draw the boundaries around an organization in an unambiguous way, today's organizational constellations often consist of highly complicated, distributed and heterogeneous arrangements that bear more resemblance to networks (in which some nodes are closely and others loosely connected) than to the well-ordered organizational hierarchies that Weber modelled in his theory of the bureaucratic organization. That in itself generates more tensions around and along boundaries, as organizational actors strategically activate certain boundaries and ignore others in the pursuit of specific organizational purposes (Giskeødegaard 2016). Such strategic activations of boundaries (and the acceptance of or resistance towards them) justify an increased scholarly interest in the explicit and implicit communication of organizational boundaries.

In addition to physical boundaries, Hernes (2004) addresses *social* and *mental* boundaries. Social boundaries exist around the social relations among (groups of) organizational members and potentially also non-members, for example as found in interorganizational relationships (Werr et al. 2009) or among professionals who may generate strong relationships and defend the boundaries in order to maintain the status of their profession through so called *boundary work* (Gieryn 1983; Lamont & Molnár 2002). Social boundaries bind actors together in mutual relationships. Social ties do not, however, guarantee smooth and harmonious relationships, because, as Werr et al. (2009) point out, there are also boundaries within the groups circumscribed by social boundaries. Organizational members' engagement in a given social relationship may be influenced by competing identities and loyalties to partly overlapping groups. Boundaries within social relations can also be felt as difficulties of understanding each other because of differing terminologies and interpretive frameworks. In other words, relationships may be strained by mental boundaries.

Social boundaries may also be perceived from a more strategic perspective. In addition to legal boundaries, Santos and Eisenhardt address *power boundaries* and *competence boundaries*. Power boundaries mark the limits of an organization's influence, for example in a market. "Reducing dependence and increasing power are seen as two sides of the same coin, each leading to greater control over external forces" (Santos & Eisenhardt 2005: 495). Organizations need to pursue the "appropriate sphere" of power implying that organizations may jeopardize control over external forces if they seek to expand the power boundary beyond the appropriate. *Competence boundaries* refer to the scope of the organization's capacity, a boundary type that is closely related to the competences of organizational members. Defining the competence boundary involves the organization's strategic reflections on which resources to hold within the organization and which to buy, for example in the form of external consultancy services. *Power boundaries* and *competence*

boundaries are based on the organization's strategic decisions and are as such contestable by the organization's stakeholders, for example employees, customers, clients, and competitors.

Santos and Eisenhardt finally address *identity boundaries*, resembling what Hernes (2004) categorizes as *mental boundaries*. Hernes understands such boundaries as circumscribing and pinpointing distinct ideas and concepts, in others words ways in which groups see their ways of thinking and working as something that differentiates them from other groups and organizations. The notion of mental boundaries seems to be the most suitable concept for the analysis of potentials and barriers in inter-professional collaboration. Such boundaries may well exist within the smallest of organizational units, for example, in inter-professional teams.

Seeing mental boundaries as circumscribing shared repertoires (e.g. professional vocabularies) suggests that mental boundaries may in fact be boundaries around the type of collective that Wenger (1998) identifies as a "community of practice". In a similar vein, Carlile (2002) introduced the concept *knowledge boundaries* in order to address the problem that knowledge is "localized, embedded and invested in practice" (Carlile 2002: 442) turning knowledge exchange across organizational boundaries into a challenge. Carlile (2002) distinguished between three different approaches to the understanding of knowledge boundaries: syntactic, semantic, and pragmatic approaches. A syntactic approach understands knowledge boundaries as a difference in terms of the quantity of knowledge possessed. Thus, boundaries can be crossed through communication as understood in Shannon and Weaver's mathematical theory of communication. In semantic approaches, boundary crossing requires a consideration of the fact that boundaries around groups and communities also involve diverging interpretations. In pragmatic approaches, political consequences of knowledge boundaries and the crossing of them are included and the significance of diversity in knowledge interests considered. In Carlile (2004), the approach is slightly different in that the boundaries themselves are understood as syntactic, semantic or pragmatic. The notions syntactic, semantic and pragmatic denote increasing levels of boundary complexity.

To Santos and Eisenhardt, the identity boundaries help organizational members answer the question of "who we are" and offer cognitive frameworks for "reduc[ing] ambiguity and facilitate[ing] decision making" (Santos & Eisenhardt 2005: 500). Santos and Eisenhardt see the identity boundary in continuation of two strands of scholarship: one that focuses on how managers communicate the organization to its members ("the manager as author" (Weick 1995: 183) and one that focuses on what organizational members feel are the "central and distinct" elements of the organizational identity. Although the concepts "mental boundary" and "identity boundary" are similar to the extent that they are non-visible or imagined boundaries, they differ in terms of meaning and perspective. Identity boundaries as understood by Santos and Eisenhardt seem to emerge in the interplay between different identity claims, especially the organizational identity professed by the management and the identity experienced by members of the organization's staff. Imbalances around identity boundaries are felt as misalignments between members' understanding of "who we are" and what others suggest the organization to be. Such misalignments occur in multiple relations both in internal organizational relations and in relations to external parties. Kreiner et al. (2006) give an example of a university professor who is told to arrange the exams in her class around the availability of certain students in her class who happen to be top athletes and players for her university's team. The professor feels her professional academic identity challenged because of the misalignment between her perception of what the identity boundaries of the university (an academic institution and not a sports manager) should be and also because she feels this requirement as a trespassing of her own identity boundaries, in the words of Kreiner et al, this is an "inter-identity boundary conflict" because it plays out between aspects of the organization's and the individual's identities

Table 1: Boundary concepts

Source	Boundary concept
Lamont & Molnar 2002	Symbolic and social boundaries
Carlile 2002	Knowledge boundaries
Carlile 2004	Syntactic, semantic and pragmatic boundaries
Hernes 2004	Physical, social and mental boundaries
Santos & Eisenhardt 2005	Legal, power, competence and identity boundaries
Kreiner, Hollensbee & Sheep 2006	Intra-identity boundaries and inter-identity boundaries

Boundary literature oriented towards the sociology of the professions (Macdonald 1999) investigates the efforts or the “work” that status groups (especially specific professions) engage in, in order to maintain their positions. Such contributions emphasize the constructed – and contested – nature of professional boundaries. Gieryn (1983) demonstrates how scientists construct group boundaries (and thus group identities) differently depending on the context in which they present their arguments (e.g. for attraction of resources or for exclusion of non-scientists from their areas of expertise). Gieryn’s argument is made against the backdrop that essentialist conceptualizations of science and scientists seem to be untenable:

Characteristics once proposed as capable of distinguishing science from non-science are found to be common among intellectual activities not ordinarily labeled scientific, or they are found not to be typical features of science-in-practice [...] characteristics of science are examined not as inherent or possibly unique, but as part of ideological efforts by scientists to distinguish their work and its products from non-scientific intellectual activities (Gieryn 1983: 781-782).

According to Gieryn, group identities are not inherent but constructed as part of the boundary work of the group’s members. In a similar vein, Hernes writes “These mechanisms [social boundaries] are connected to identity because our identity is based on the boundaries we draw in relation to other groups” (Hernes 2004: 14). Thus, Gieryn and other scholars writing within a sociological understanding of group boundaries confirm the centrality of boundaries, their role in the constitution of group identities, and their discursive manifestations.

2.2 *Boundary spanners and boundary objects in the communication of and across boundaries*

The boundary literature offers concrete concepts enabling analysis and understanding of communication of boundaries. Here, *boundary spanners* and *boundary objects* stand out as the most frequently addressed and the most relevant concepts for cases exploring communication around or across organizational boundaries.

2.2.1 *Boundary spanners*

Boundary spanners can be defined as “human agents who cross and connect various organizations or units” (Vakkayil 2012: 210). However, definitions of the boundary spanner often includes the idea that for the boundary spanner it is a part of his or her professional responsibilities to cross organizational boundaries and pave the way for collaboration. E.g. “The boundary spanner is considered to be an individual who has a dedicated job role or responsibility to work in a collaborative

environment” (Bordogna 2017: 4).

Having been assigned a position that formally involves boundary spanning activities does not automatically turn a person into a boundary spanner (Levina & Vaast 2005). Levina and Vaast distinguish between *nominated boundary spanners* and *boundary spanners-in-practice*. Nominated boundary spanners have boundary spanning activities as part of their officially assigned job tasks. However, they “are not engaged in boundary spanning” (Levina & Vaast 2005: 340). Boundary spanners in practice perform boundary spanning activities, and these activities may be assigned to them as official duties, but boundary spanners in practice may also engage in these activities without being officially appointed to do this. Engaging in boundary spanning means “relating practices in one field to practices in another by negotiating the meaning and terms of the relationship” (Levina & Vaast 2005: 339). Roberts and Beamish (2017) find that in an international context boundary spanning activities involve *scaffolding*, in other words the active support of colleagues’ learning processes in order for these colleagues to become familiar with “foreign knowledge”, a term denoting knowledge of non-domestic business practices, foreign language competence, and intercultural understanding. In a more concrete sense, scaffolding would consist of guidance, mentoring, and even regular teaching. Organizations that have employees performing boundary spanning-in-practice will also benefit from more effective resolution of internal and external conflicts (Schotter & Beamish 2011). Barner-Rasmussen et al. (2014) provide a *typology of boundary-spanning functions: exchange* (typically of information), *linking*, implying the use of personal networks to unite otherwise “disconnected actors” (Barner-Rasmussen et al. 2014: 888), *facilitating*, involving “assisting in cross-border interactions of others” (Barner-Rasmussen et al. 2014: 888), and finally *intervening*, referring to actions performed by the boundary spanner in order to secure a positive outcome of cross-boundary interaction, for example conflict resolution. The boundary spanning functions are listed in ascending order in terms of the demands that the individual functions make on the boundary spanner. Disseminating information is easier and less risky than mediating in a conflict and run the risk of marginalization.

Levina and Vaast argue that “Boundary spanners-in-practice engage in building a new joint field between the two fields” (Levina & Vaast 2005: 339), in other words, boundary spanners-in-practice do not leave the boundaries intact but break certain boundaries and establish new ones. Theoretically, Levina and Vaast construct the boundary spanning position as a temporary one. Also in practice, staying in the boundary spanner position permanently or for a longer period of time is associated with emotional strain (Levina & Vaast 2005; Wenger 1998). This involves the risk of being marginalized in both communities (or both fields, as Levina and Vaast put it). Thus, real boundary spanners will create or facilitate the creation of new fields or communities, in which they then become insiders – or they will escape the emotional pressure and become nominated boundary spanners. The assumption that new fields necessarily emerge from boundary spanning activities is not shared by all contributions to the boundary spanning concept. Both in Roberts and Beamish’ investigation of Korean returnee managers’ role in building organizational internationalization capabilities and in Schotter and Beamish’ investigation of boundary spanning in headquarter-subsidiary conflicts, it is assumed that boundaries persist. In both contributions, it is mentioned that boundary spanners value their role and understand its importance for the organization.

Vakkyil’s definition of the boundary spanner is quite broad, and it might be argued that a wide range of organizational members could be understood as boundary spanners as they regularly establish contacts across the organization’s internal and external boundaries. Given that boundaries also need to be understood as dynamic, fluid, and composite (Hernes 2004), would that not lead to a situation in which all – or at least the majority of members of most organizations - are engaged in boundary spanning? Then the notion of boundary spanning would simply denote a prevalent feature of modern working life and would contribute little in terms of conceptual clarity and analytical applicability. Inherent in most understandings of boundary spanning is, however, the idea that it is a

difficult and (socially) risky task, and that the success of the boundary spanner's efforts is far from guaranteed (Levina & Vaast 2005; Schotter et al. 2017; Kane & Levina 2017). How can boundary spanning be defined in a way that clarifies that the boundary spanner function is for the select few rather than something that most people do on an everyday basis? Kane and Levina (2017) suggest that three criteria apply when determining whether an individual is a boundary spanner-in-practice or not. Firstly, they need to be (at least) legitimate peripheral participants (Lave & Wenger 1998) in both groups. This entails a basic understanding of the knowledge areas and practices of both groups. Secondly, such interprofessional and/or interdisciplinary insight will have to be combined with a formal role as negotiator or mediator. This seems to imply that an organizationally legitimized position as boundary spanner contributes to the effectiveness of the boundary spanning process and ensures the recognition and uptake of boundary spanning results in the organization. Finally, the boundary spanner-in-practice must also have the *inclination* to perform the boundary spanning role, which often implies representing and being the spokesperson for groups of a lower status in the organization. This happens when the boundary spanner represents the views of for example lower ranking employees or ethnic minority groups in the organization.

Kane & Levina's tripartite definition of the boundary spanner exposes the demanding and challenging nature of boundary spanning in practice. In a concrete sense, it makes clear that boundary spanning requires individuals who possess (at least) dual competences, for example both mastery of their professional field and management skills. Secondly, acting on a moral and social commitment to speak for lower status groups may, at least in some organizations, threaten the spokesperson's own status and problematize his/her loyalty towards his/her "own kind". However, without the willingness to run such a risk the boundary spanner is likely to be expelled from the community in question. In such a case, boundary spanning becomes impossible: "in cases when an individual is marginalized by one of the groups due to an affiliation with the other group, he or she may be denied access to the practices of that group, which could undermine his or her ability to be effective." (Kane & Levina 2017: 543). Understanding boundary-spanning as involving multidisciplinary and interprofessional knowledge, an organizationally recognized bargaining position and a commitment to facilitate social change across organizational power hierarches goes a long way to explain that real boundary spanning takes both organizational and individual efforts and rarely happens occasionally as part of everyone's day-to-day business. As illustrated by Kane and Levina's study, boundary spanning without inclination stabilizes existing power relations and hinders exchange of knowledge and ideas. Boundary-spanning without organizational recognition of the boundary-spanners themselves and of the contributions of lower-status groups enabled through boundary-spanning may create an initial impression among lower-status groups that they are listened to. These employees are, however, likely to realize the pro forma nature of the boundary spanning activities.

If boundary spanning activities are actually performed, these activities need to be investigated in order to understand which functions the boundary spanner actually performs (Barner-Rasmussen et al. 2014), and what the outcomes for the organization are likely to be. All cases included in the special issue concern individuals crossing organizational boundaries. It remains a question to be investigated in each individual case if crossing organizational boundaries also involves spanning organizational boundaries. For example, in Jæger's article in this volume, internationalization is in focus. Internationalization in higher education obviously implies boundary-crossing (Holtbrügge and Engelhard 2016). But to what extent, can we also observe processes of boundary-spanning? Are international students able to contribute with 'foreign knowledge' (Roberts and Beamish 2017) and thus function as boundary spanners between a local university and academic traditions from a broad variety of countries? And do domestic students function as boundary spanners who assist in scaffolding international students' learning of new working methods?

2.2.2 Boundary objects

Physical or symbolic objects that travel across organizational boundaries and enable or enhance communication and understanding across such boundaries are often referred to as ‘boundary objects’ (e.g. Wenger 1998; Oever 2019). Dillon (2008) defines boundary objects as “artefacts, documents, institutional and administrative protocols, etc. that have to be addressed by people from different communities if shared understanding is to be built” (259). The concept originates in a case study of Berkeley’s Museum of Vertebrate Zoology (MVZ) conducted by Star and Griesemer (1989). The case of the foundation of a museum of natural history, which demanded the collaboration of a diverse collection of amateurs, professionals and scientists - and thus of university, museum, and social movement organizations – bears much resemblance to present-day arrangements of inter-organizational, inter-sectorial and inter-professional collaboration. For the authors, the intriguing question was: why and how did the key actors in this project succeed in establishing collections meeting scientific standards, in marshalling large groups of volunteers, and in securing the scientific authority of the director and primary initiator? In a boundary perspective, what is interesting about this case is that the project’s success seems to depend on the simultaneous maintenance and crossing of organizational boundaries. For example, the amateur enthusiasm for natural preservation important to volunteers and scientific rigor important to involved scientists were successfully combined. The case showed that for multi-interest and interprofessional collaboration to work, consensus is not of the essence. What is important is meaningful, mutually beneficial exchange. For this exchange, boundary objects play a crucial role.

Boundary objects have the interesting quality that they can pass organizational boundaries without damaging neither the boundary nor the object itself in the process. Thus, Star and Griesemer (1989) understand boundary objects as “analytic concepts of those scientific objects which both inhabit several intersecting social worlds and satisfy the informational requirements of each of them” (393). This is in opposition to what Star and Griesemer refer to as other means of dealing with boundaries separating diverging interests and concerns: “imperialist imposition of representations, coercion, silencing and fragmentation” (Star & Griesemer 1989: 413). Boundary objects gain this quality by being at the same time adaptable to different contexts and “robust enough to maintain a common identity across sites. They are weakly structured in common use, and become strongly structured in individual-site use” (Star & Griesemer 1989: 393). Star and Griesemer identify four types of boundary objects: repositories, ideal types, [objects with] coincident boundaries (but distinct contents across contexts. Wenger (1998) provides the example of a building being used for multiple purposes by different groups), and finally standardized forms (“methods of common communication across boundaries”) (Star & Griesemer 1989: 411).

The boundary object concept has played a significant role in research on knowledge in organizations (Carlile 2002, Carlile 2004, Wenger 1998). Addressing the challenge of collaboration barriers in knowledge-intensive environments, studies of professional interaction among groups holding advanced, domain-specific knowledge found the notion of the boundary object useful. The notion applies to abstract and concrete objects that establish a channel or medium through which communication between different groups of domain specialists can take place (Carlile 2004). In knowledge-intensive environments reliant on diverse forms of expertise, objects that represent the shareable gain importance as facilitators of communication and coordination. Sometimes, such objects are deliberately designed for boundary-crossing purposes such as in Carlile’s study on the use of a simulation tool in a manufacturing company. The tool enabled coordination among diverse groups of engineers in a situation where each would insist on their own aspects of vehicle design. Other objects simply become boundary objects through the diverse uses that are made of them.

As Wenger notes “Not all objects are boundary objects, neither by design or through their use” (1998, 107). Only objects that travel across community/sector boundaries and that “satisfy the informational requirements” of each of the communities or sectors qualify as boundary objects. As

Wenger points out, satisfaction of informational requirements does not entail alignment of the interpretations made of the object. At the same time as this constitutes the strength of the boundary object, it also illustrates its weaknesses. Carlile (2004) explains how boundary objects serving informational needs function well in cases where syntactic boundaries need to be crossed. However, when it comes to semantic and pragmatic boundaries the successful function of the boundary object relies on the ability of the actors to use the object in a way that serves collaborative boundary-crossing: “when a semantic or pragmatic boundary is faced, the ability of the actors to use the boundary object can no longer be taken for granted” (Carlile 2004: 565). In other words, whether something can be a boundary object depends on situational factors. Situational factors may constitute what Carlile (2002) refers to as ‘knowledge boundaries’ implying that the level of knowledge specialization within professional groups generates boundaries that may not be surmountable through any form of object.

Still, successful communication across organizational boundaries would seem to involve the skilled use of boundary objects. To return to the example of “subtle discrimination”, well-meaning attempts to cross boundaries between minority and majority employees that involved “imperialist impositions of representations” (Star & Griesemer 1989: 413) such as treating the minority employee as an exception from an otherwise negatively evaluated group led to communicative breakdowns. Instead, minority professionals asked that professional standards be activated as a boundary object enabling communication of recognition across ethnic boundaries in the workplace. Taking an interest in how boundaries are communicated is hardly possible without investigating the role of boundary objects. Scholars have for example investigated knowledge sharing and conceived of information sharing systems and enterprise social media as boundary objects (e.g. Sapsed & Salter: 2004; Filstad et al. 2018). Such platforms may mean different things to different people and still serve purposes of exchange and boundary crossing (Thøis Madsen, this special issue). The concept of boundary object is specifically interesting in relation to strategic and leadership communication. Often, such communication involves what Star and Griesemer refer to as “imperialist imposition of representation”, in other words communications reflecting the interests and perspectives of management coupled with the expectation that this perspective will be adopted by other groups or layers in the organization. In contrast, successful use of boundary objects involves the creation of objects that legitimately can mean (more or less) different things to different people while still retaining an identity across contexts. “When a boundary object serves multiple constituencies, each has only partial control over the interpretation of the object” (Wenger 1998: 108).

Organizations themselves can be boundary objects according to Star and Griesemer. The authors mention libraries and museums as examples of boundary objects of the type “repository” (Star & Griesemer 1989: 410). Organizations and groups sharing this boundary object can selectively draw on the features of the object that they find useful. “People from different worlds can use or borrow from the ‘pile’ for their own purposes without having directly to negotiate differences in purpose” (Star & Griesemer 1989: 410). Concretely, MVZ was a shared boundary object – a point of connection – for multiple groups: scientists, NGOs and members of the general public taking an interest in the natural environment of California and its preservation. The museum itself would support the interests and activities of each group without demanding similarity in identity or purpose. In this special issue, Knorr’s study on a regional business development organization shows how diverse groups can utilize such an organization as a boundary object to pursue own and collective interests and, at the same time, demonstrate varying degrees of commitment.

3. Contributions to the special issue: crossing organizational boundaries

All contributions to this special issue take their point of departure in the realization that boundary crossing is a vital and integral aspect of every organization’s existence. Furthermore, all contributions understand organizational boundaries as an important research focus because it takes thorough

investigation to disclose the nature and impact of organizational boundaries. Despite the ephemeral character of many boundaries, they effectively govern the everyday life of organizational members. The breadth of studied organizations confirms the prioritization of boundary-crossing by contemporary organizations. Most organizations see outreach, collaboration and active engagement of stakeholders as a condition for survival. For some organizations, this does not only lead to new opportunities but also to concerns over loss of autonomy and integrity. In a study of individual-level consequences of increased university-business collaboration Lam (2015) found that individual academics handle ensuing boundary dilemmas in quite diverse ways. Some evidently deplored the fading away of clear boundaries between university research and business collaboration, fearing the loss of academic integrity, while others embraced the merging of research and commercialization fully. Most of the participants, however, represented some form of hybrid position but were acutely aware of the boundary processes and their consequences. The example illustrates how navigating in a world of boundary-crossing and –contesting challenges organizations' ability to uphold recognizable identities and secure legitimacy among key audiences.

This is illustrated in Schmeltz' contribution to this volume. She studies the identity presentation of social enterprise organizations that establish themselves at the boundary between organizational forms: the private for-profit company and the non-profit charity. Striving to succeed on market terms and at the same time demonstrate full commitment to social goals subjects the social enterprise to critical scrutiny from multiple perspectives. Schmeltz investigates how such crossing of – or perhaps rather balancing at – the boundary between public and private is accomplished in these organizations' web-presentations.

Two contributions address universities' involvement in boundary-crossing processes. Jæger studies the experience of boundary-crossing students. Today, students often cross university boundaries in order to build up attractive academic and professional profiles. At the same time, universities maintain distinct scholarly and pedagogic identities, which may increase the student's experience of unfamiliarity when entering new educational contexts. Jæger investigates how crossing the boundaries of a university practicing problem-based learning leads to both enriching and confusing student experiences. Wilgaard examines how university academics increasingly need to be involved in the university's third mission, its engagement with external private and public sector actors. This requires the researcher to perform the role of a boundary spanner facilitating collaboration and – at the same time – to extract research data and findings through this very collaboration. The author argues that university staff is often poorly prepared for such complex interactions and illustrates via two cases that third mission collaboration can fruitfully be studied through the lens of action research.

Obviously, all contributions pay attention to the organizational context of the boundary-crossing efforts. Large companies constantly face the risk of having corporate mishaps or scandals reach the public eye. Consequently, it is valuable for management to detect and contain employee concerns and criticism in order to avoid leaks to external media. Internal social media may provide employees with a platform allowing them to articulate positive and negative aspects of organizational life and, first and foremost, to cross organizational layers and reach the attention of senior management. Such communications are studied in Thøis Madsen's contribution to this special issue. She investigates such attempts to circumvent the organizational hierarchy on internal social media in a large Danish bank.

The challenge of communicating across the levels of large organizations also takes center stage in Sanden's study of two manufacturing companies headquartered in Denmark. Operating transnationally, their communication challenges not only include establishing effective communication platforms but also handling diverse linguistic situations involving speakers of different languages. Sanden demonstrates that companies communicating across language, education, and organization hierarchy boundaries face a distinct set of communication problems that call for

more attention, also within the area of language-sensitive management research.

Among scholars interested in organizational boundaries, the interest in crossing and going beyond organizational boundaries is increasing in today's globalized and competitive organizational environments. Knorr investigates how collaboration between 11 Danish municipalities in the network organization Business Region North Denmark facilitated the development of a sense of determination and visibility in the region. The willingness and ability of key political actors to engage in "transformative" boundary spanning plays a key role in continued efforts to establish the region as a national and global actor. Knorr's article emphasizes the importance of concrete collaboration practices and interpersonal relations for the success of such an endeavor.

Knorr's article as well as the other contributions to this special issue reflect the growing scholarly interest in organizational boundaries as conditions for and enablers of external collaboration rather than as constraints. Boundary spanning is generally seen as fostering organizational creativity and renewal (Andersen et al. 2013) and the concept of the boundary object as helpful for understanding inter-organizational collaboration. Against this backdrop, the contributions to this issue demonstrate how boundary practices play out in diverse organizational settings. Collectively the contributions cover a broad spectrum of organizations and provide a diverse and multifaceted picture of boundary practices conducted at employee and organizational level. A specific focus has been on the communicative activation of organizational boundaries, for example in web presentations, internal social media or in interviews on everyday practices in organizations. Unsurprisingly, concrete case studies uncover a wealth of tensions and challenges around organizational boundaries embedded in the mundane activities of organizational everyday life. The studies demonstrate, for example, how conditions for boundary spanning activities are complicated and constrained by local circumstances and particular stakeholder interests. They also illustrate the impact of internal organizational boundaries and thus the complexity of social relations and identities. As a whole, they demonstrate the value of a focused interest in organizational boundaries for the understanding of what organizations are, and what they aspire to become through their efforts to maintain, cross or expand their own boundaries.

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