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Managing paradoxes at the research-practice interface: A boundary management framework

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MANAGING PARADOXES AT THE RESEARCH-PRACTICE INTERFACE: A BOUNDARY MANAGEMENT FRAMEWORK

Abstract: In line with ongoing calls to address the paradoxes that shape relationships between academics and practitioners, this paper draws upon insights from social studies of science about boundaries to re-conceptualize the research-practice divide as a problem of boundary management. We define boundaries as dual entities that separate but also connect distinct occupational communities. We argue that this unique and 'paradoxical' property of boundaries makes them a useful meaning of exploring the tensions structuring the research-practice interface. Building on illustrations from prior empirical studies, we develop a multilevel integrative framework. It maps how 'separating' boundaries, such as cognitive, material, political and identity boundaries, reinforce research-practice tensions yet can be surmounted by means of 'connecting' boundaries, such as boundary objects, boundary organizations and boundary communities. Our framework highlights how academics and practitioners can productively maintain their differences while dynamically managing the challenges of collaborating through appropriate boundary management.

Key words: Research-practice divide, Boundary community, Boundary object, Boundary organization, Knowledge management.

MANAGING PARADOXES AT THE RESEARCH-PRACTICE INTERFACE: A BOUNDARY MANAGEMENT FRAMEWORK

In a recent Editorial of the *Journal of Management*, Bartunek and Rynes (2014) seek to sketch a more "sophisticated understanding of the academic-practitioner gap" that can "shift away from viewing the gap as divisive to appreciating the multiple types of dynamic tensions it embodies" (p. 1195). Informed by Smith and Lewis' (2011) framework, Bartunek and Rynes' (2014) analysis moves beyond the recognition of the existence of 'tensions' that reflect profound dichotomies between academics' and practitioners' language and knowledge (Hodgkinson & Starkey, 2011; Starbuck & Mezias, 2003), goals and values (Gulati, 2007; Hambrick, 2007), or status and incentives (Shapiro, Kirkman, & Courtney, 2007; Stern & Barley, 1996). Instead they suggest that these tensions can support 'dialectics' between opposed elements involved at the research-practice interface (Seo et al., 2004), and may even take the persistent, interrelated and cyclical form of 'paradoxes'.

Although we applaud this renewed and sophisticated description of the academic-practice interface, we think that there are three important implications of viewing the research-practice as a paradoxical set of multiple types of dynamic tensions which have not yet been fully considered. First, research-practice tensions are not solely related to knowledge, values or incentive. They may also relate to *material* aspects of the relationships between academic and practitioners. Second, tensions around goals and values may be reinforced by lasting *status threats* that prevent attempts at bridging distinct occupational communities (Abott, 1988; Zuckerman, 1999). Third, we argue, recognizing the 'co-existence' and 'connections' of multiple tensions at the academic-practitioner interface involves the *simultaneous consideration of multiple dimensions* of analysis when dealing with these tensions, as

relieving tensions at one level (e.g., values) may enhance tensions at another level (e.g., incentives).

In this paper, we build on Bartunek and Rynes' (2014) breakthrough proposition concerning the dialectal nature of research-practice tensions to address these issues by proposing a new framework of 'boundary management'. This framework explains how multiple sources of tensions, that we theorize as *cognitive*, *material*, *political* and *identity 'separating boundaries'* between academics and practitioners, can be dynamically managed through the constitution of *'connecting boundaries'* between these two distinct communities. Although this framework recognizes the existence of multiple tensions between academics and practitioners, it also shows that such tensions can be used productively through careful boundary management that helps maintain differences which nurture new knowledge production (Van De Ven & Johnson, 2006). Hence, we recognize the 'paradoxical' nature of the academic-practitioner interface (Bartunek & Rynes, 2014) yet advance its analysis by focusing on the so far overlooked role of boundaries in the management of academic-practitioner relationships.

Theoretically, we rely on the social science literature on boundaries which shows the dual and paradoxical nature of boundaries and conceptualize them as entities that simultaneously 'separate' and 'differentiate' but also 'interface' and 'connect' social spheres (Lamont & Molnár, 2002; Mol & Law, 2005). Building on this body of knowledge, we offer a renewed conceptualization of the research-practice interface as a set of 'separating' and 'connecting' boundaries. The social science literature on boundaries indeed points to the complexity and multiplicity of knowledge boundaries that can potentially separate occupational communities (Carlile, 2004; Lamont & Molnár, 2002; Star, 2010). It can thus help us recognize and theorize the

multidimensional nature of the 'research-practice divide' (Bartunek & Rynes, 2014) by considering how multiple types of boundaries, such as cognitive, material, political and identity boundaries, interplay.

In addition, thanks to the concepts of 'boundary object' (Bechky, 2003b; Carlile, 2002, 2004; Star & Griesemer, 1989) and 'boundary organization' (Guston, 2001; Miller, 2001; O'Mahony & Bechky, 2008), this literature on boundaries allow us to conceptualize how the two communities of management scholars and practitioners can be (re)connected in order to enable knowledge co-creation thanks to 'connecting boundaries'. We significantly consolidate and extend the analysis of 'connecting boundaries' by relying on insights from two recent empirical studies (Cabantous & Gond, 2015; Empson, 2013) to propose an additional concept of 'boundary community'.

Our paper is organized as follows. We first introduce our conceptualization of boundaries as 'dual entities' that can either separate or connect communities, and show how this approach can address the three problems we identified in relation to paradoxes and tensions at the research-practice gap. We then present our boundary management framework that theorizes the research-practice interface and explains how 'connecting' boundaries – boundary objects, boundary organizations and boundary communities – help manage dynamically the tensions permanently produced by the 'separating' cognitive, material, political and identity boundaries. We build on prior studies and empirical cases of academics-practitioners collaborations to illustrate the multiple dimensions of this framework. Then, we use the framework to analyze how research-practice tensions can be managed by linking 'connecting boundaries' with each other, or by balancing dynamically 'separating' and

'connecting' boundaries. We finally discuss the implications of our analysis for theory and the management of the research-practice interface.

A BOUNDARY PERSPECTIVE ON THE RESEARCH-PRACTICE DIVIDE

Reconsidering Research-Practice Tensions as Separating Boundaries

Prior research that tackles the issue of the relationship between research and practice in management has usually framed this relationship either as a "gap" that has to be "filled" or as "divide" that has to be "crossed" (Bansal et al., 2012; Bartunek & Rynes, 2014; Rynes, 2007a, b; Van De Ven, 1997). This framing assumes that academics and practitioners are two distinct social systems clearly demarcated from each other (Kieser & Leiner, 2009; Merton, 1973). It relies on the implicit assumption that boundaries 'separate' these social systems (Heracleous, 2004). Boundaries are conceptualized here as entities that separate, differentiate or segregate social groups on symbolic or material dimensions (Lamont & Molnár, 2002).

Building on this assumption that boundaries separate communities, prior works on the research-practice divide point to the lack of relationships between academics and practitioners, and underline differences in the two communities' approaches to knowledge production, valuation and use (Empson, 2013; Gulati, 2007; Jarzabkowski, Giulietti, Oliveira, & Amoo, 2013). In this paper, we propose to reconceptualise this prior research as a set of 'separating boundaries' that prevent knowledge from flowing across communities (Sturdy, Clark, Finchman, & Handley, 2009). Table 1 offers a synthetic overview that reorganizes the research-practice literature along the four types of separating boundaries we have identified in prior research: cognitive, material, political and identity boundaries.

INSERT TABLE 1 ABOUT HERE

Cognitive boundaries. Boundaries arise from cognitive or knowledge differences – such as language (Starbuck & Mezias, 2003), problem-solving styles (Ford et al., 2005) or modes of knowledge production (Van De Ven & Johnson, 2006). They constitute the main type of 'separating boundary,' according to prior research (Shapiro et al., 2007; Shrivastava & Mitroff, 1984). The established view is that academics and practitioners produce, use, and value two distinct types of knowledge (Huff, 2000). Academics use and produce primarily a 'scholarly' knowledge oriented towards generalization and theories, whereas practitioners use and produce primarily a 'practical' knowledge oriented towards particular situations and connected to experience (Van De Ven & Johnson, 2006). Finally, because a key element in the process of academic knowledge-building is to reconsider the assumptions practitioners take for granted (Locke & Golden-Biddle, 1997), what will be 'interesting' for one community is likely to be 'obvious' for the other (Davis, 1971: 330-331).

Material boundaries. Material boundaries encompass the multiple physical and spatial dimensions that separate research and practice. Physical boundaries that separate the inside from the outside of a workplace have powerful framing effects on the members of an organization (Fleming & Spicer, 2004). Material boundaries are enhanced and shaped by electronic communications (Hernes, 2004). Academics and practitioners usually operate in different "physical organizations" – universities and corporations – and do not necessarily have a space where they can meet and discuss. This situation creates "material barriers" to knowledge co-production that have been implicitly recognized in prior studies. For instance, Ford, Duncan,

Bedeian, Ginter, Rouschulp and Adams (2005) claim that successful encounters between academics and practitioners require that one of the parties leaves the "comfortable and familiar setting" of its organization (p. 23). Other authors point to the separating effects of material boundaries by focusing on the need to create "liminal" spatial settings where both parties can physically meet (Bartunek, 2007). For instance, Tushman, O'Reilly, Fenollosa, Kleinbaum and McGrath (2007) suggest that programs of executive education can provide such liminal spaces. Amabile et al. (2001) outline the effectiveness of such an "electronic disconnect" when they note that shared agenda and information exchange prior to meetings are key to success in academic-practitioner collaborations.

Political boundaries. A third category of boundaries that separate research and practice is political and points to differences in terms of status, legitimacy and incentives between the communities (Rynes, Colbert, & Brown, 2002; Rynes, Giluk, & Brown, 2007). On the one hand, academics have an interest in knowledge for its own sake, and gain their status through peer recognition and publications (Hambrick, 2007). It has been argued that the tenure system at US universities tends to maintain this focus, for instance by keeping organizational scholars distant from important social or practical issues (Greenwood, Hinings, & Suddaby, 2002; Stern & Barley, 1996). On the other hand, practitioners have an interest in solving practical problems, and their status derives from the capacity to generate business opportunities (Empson, 2013). These differences mean there is little incentive for members of either group to cross the divide (Bartunek & Rynes, 2014).

Identity boundaries. As Empson (2013) has argued, the differences in the valuation and recognition of different types of knowledge relate in part to deeper identity differences between the two communities. This becomes clear when using

Ashford, Harrison's and Corley's (2008) expanded conceptualization of identity which emphasizes the attributes of identity, such as self-definition and priorities, together with content of identity, such as values, goals, traits, and abilities, and the behaviors that underlie them. As Beyer and Trice (1982) state "the most persistent observation in the literature … is that researchers and users belong to separate communities with very different values and ideologies, and these differences impede utilization" (p. 608). Academics seek to create generalizable theory of lasting impact; by contrast practitioners seek immediate solutions to practical problems (Hambrick, 2007; Jarzabkowski, Mohrman, & Scherer, 2010; Pfeffer, 2007). Academics may spend many years crafting an elegant theoretical or empirical study; practitioners have limited understanding of (or interest in) academic rules of evidence and research methods (Gulati, 2007; Lorsch, 2009; Shapiro et al., 2007). So, in addition to having fundamentally different views about the nature and purpose of management knowledge (Beyer & Trice, 1982; Rynes, Bartunek, & Daft, 2001), management academics and practitioners also differ in terms of their self-definitions, goals, values, and abilities.

Taken as a whole, the cognitive, material, cognitive, political and identity 'separating boundaries' between academics and practitioners logically call for strategies that can bridge both groups.

Evaluating the Limitation of Prior Bridging Strategies

Even though most articles on the research-practice divide make suggestions about 'how to bridge the gap' (Beyer & Trice, 1982; Cohen, 2007; Ford et al., 2005; Gulati, 2007; Rynes et al., 2007), Bansal et al. (2012) notice that the literature on the research-practice divide suffers from a relative lack of discussion about what could

be comprehensive and well resourced 'bridging strategies'. Indeed, the overall picture of bridging strategies that emerges from prior studies is fragmented and mostly prescriptive, with an evident lack of theorization, and fail to acknowledge the paradoxical nature of the academic-practitioner tensions and hence their potential persistent nature.

Building on previous reviews of bridging strategies (Bansal et al., 2012; Van De Ven & Johnson, 2006), it is possible to identify two dominant approaches. The first type of bridging strategy is concerned with how to improve the *transfer* or *translation* of knowledge from academia to practice. Transfer strategies typically urge researchers to take responsibility for explaining how practitioners can use their findings (Beer, 2001) or to argue rhetorically to convince practitioners that their research findings are relevant (Van De Ven & Johnson, 2006). Strategies that focus on the need for translation build on the idea that academics and practitioners produce two distinct types of knowledge, and invite academics to invest 'practical knowledge' with a status and recognize it as a valuable source (Van De Ven & Johnson, 2006). These authors promote solutions such as "evidence-based management," which consists in providing practitioners with a review of the best available practice so that they can more readily interpret and use research findings (Briner, Denyer, & Rousseau, 2009; Pfeffer & Sutton, 2006; Rynes et al., 2002; Rynes et al., 2007).

A second type of bridging strategy suggests tackling the research-practice divide at its source. Instead of trying to cross the divide by transferring or translating knowledge, these strategies promote the production of a third type of knowledge, i.e. a practice-based scientific knowledge, which is located between practice and contributing disciplines and co-produced by academics and practitioners (Tranfield &

Starkey, 1998; Van De Ven & Johnson, 2006). Van De Ven and Johnson's strategy of "engaged scholarship" (2006) and Bartunek's "relational strategy" (2007) are two examples of a bridging strategy focused on knowledge co-production. Although these may help to address the research-practice divide, prior bridging strategies suffer from three problems.

Problem 1: Neglect of materiality. First, the discussion on bridging strategies has largely focused on 'separating' cognitive boundaries (Bartunek & Rynes, 2014; Empson, 2013; Van De Ven & Johnson, 2006) and has relied on a narrow conceptualization of cognition as something that is exclusively located in the mind of individuals. It has hence neglected the insight that cognition is usually 'distributed' between humans and objects (Hutchins, 1995; Weick & Roberts, 1983). As a result, prior bridging strategies fail to consider the importance of material boundaries between research and practice. For instance, most transfer or translation types of bridging strategies focus on the context of communication, speech and writing (Rynes et al., 2002, 2007). They rarely consider that the design of artifacts such as computer programs and decision making tools—which embed management theories—can increase the reach of academic knowledge (Callon, 1998; MacKenzie & Millo, 2003). Yet, studies of knowledge transfer across occupational groups suggest that physical and spatial materiality (the artifacts and workspaces, rather than theoretical concepts, which people work with from day to day) are crucial to knowledge co-production (Carlile, 2004).

Problem 2: Identity and status threats. A second important limitation of prior studies of bridging strategies is their neglect (or setting aside) of non-cognitive boundaries, in particular the identity and political boundaries that have been identified as central in the literature on the research-practice divide (Bartunek & Rynes, 2014).

For instance, Van De Ven and Johnson (2006) call for the development of "learning communities" around collaborative projects between academics and practitioners, yet they do not consider explicitly the identity dimension – how people define their role and status – inherent to any community. Yet, as Empson's (2013) study shows, the success of "engaged scholarship" for knowledge co-production is severely threatened by identity conflicts that are likely to arise when an individual tries to incorporate the identities of both academic and practitioner.

In addition, knowledge co-production strategies underestimate the strength of political boundaries. Van De Ven and Johnson (2006: 808), for instance, explicitly disregard this type of boundary, as they aim to shift the focus of the discussion from the institutional to the individual level of analysis. Their model of "engaged scholarship" is, as a result, dedicated to scholars *already* motivated to take part in collaborative research. However, such scholars are likely to be few. According to the sociology of professions literature, moves across occupational groups are risky options (Abott, 1988; Zuckerman, 1999). First, "boundary-spanners" are not guaranteed to perform well in their new community, even if they were successful in their original community. Second, their move may jeopardize their status and legitimacy in their original occupational group (Zuckerman, Kim, Ukanwa, & von Rittmann, 2003). The tacit request for a dual identity inherent to "engaged scholarship" (Empson, 2013) involves forms of profession-spanning or multiple identity-building that can be punished by peers. The cognitive mechanism at play in the "legitimacy discount" – the penalty for illegitimate role performance – supported for instance by diversified firms (Zuckerman, 1999) or generalist wine-makers (Negro & Leung, 2013) explains such negative reactions. Hence, bridging strategies involve potential threats to boundary-spanners' legitimacy that have been neglected thus far.

Problem 3: Unidimensionality. A third limitation of prior bridging strategies is their focus on a sub-set of boundaries that is too narrow to apply to the multiplicity of boundaries identified in the research-practice divide. In focusing on one type of boundary while discounting (or neglecting) the likely influence of others, a bridging strategy may fall short of addressing the research-practice divide. For instance, the engagement of scholars with practitioners in a common knowledge-building project through the creation of a new liminal space may be jeopardized by failure to consider the incentives that either side may have to engage in this project and by neglect of their distinct values. In other words, reframed in the terminology of separating boundaries, when researchers and practitioners work together in an attempt to break down an cognitive boundary by overcoming a material boundary, they may neglect each other's needs to secure their own positions by maintaining political boundaries and perpetuating their identity boundaries. Because there are so many different types of separating boundaries between research and practice, we need a renewed understanding of bridging strategies as ways to manage these boundaries. We propose to rely on the duality of boundaries to address the three aforementioned problems.

Considering the Roles of Connecting Boundaries

Research in social science suggests that boundaries are not only separators that mark out differences and delineate social groups, but are also connectors that interface social spheres, facilitating communication and interaction between them (Heracleous, 2004; Lamont & Molnár, 2002: 180). The connecting nature of boundaries is well theorized in work on the sociology of science and knowledge management (Lamont & Molnár, 2002; Mol & Law, 2005). Specifically, the concepts

of “boundary object” (Star & Griesemer, 1989) and “boundary organizations” (Guston, 2001) shed light on how boundaries may connect research and practice by facilitating the flow of knowledge between communities (Cabantous & Gond, 2015). These concepts provide complementary perspectives on how boundaries may enhance knowledge co-production either across social spheres (Miller, 2001) or across distinct occupational groups within a given organization (Bechky, 2003a, b).

Boundary objects. A material device becomes a “boundary object” when it is used by groups of people operating in distinct social worlds to undertake a common activity (Star & Griesemer, 1989). Boundary objects are “both plastic enough to adapt to local needs and constraints of the several parties employing them, yet 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). In other words, boundary objects have specific properties that enable them to coordinate actions between actors operating in distinct occupational groups. Examples of boundary objects include Gantt charts that support the coordination of different categories of actors in the production context (Yakura, 2002) and strategy frameworks such as the SWOT matrix that can be tailored by managers for local purposes (Spee & Jarzabkowski, 2009). These objects are part of the material boundary that relates distinct communities. Prior studies have demonstrated their central role in facilitating knowledge management by establishing shared meanings across social groups (Star & Griesemer, 1989) or by clarifying the understanding of domain-specific knowledge across occupational groups (Bechky, 2003a, b; Carlile, 2004).

Although useful for the purpose of knowledge transfer and translation, boundary objects are not always sufficient for managing identity and political boundaries, for

instance by aligning the interests of different groups. This insufficiency may undermine knowledge co-creation among them (Guston, 2001; Miller, 2001; O'Mahony & Bechky, 2008).

Boundary organizations. Guston (2001) proposed the notion of boundary organization to specify the organizational contexts that accommodate different interests between occupational communities and hence stabilize cooperation by enabling the design and use of boundary objects (Miller, 2001). From a governance perspective, these organizations are characterized by being accountable to two distinct social worlds (Guston, 2001). They can enhance collaborations between organizations with distinct goals, such as open-source communities and software firms (O'Mahony & Bechky, 2008) and facilitate the management of issues such as global warming across the scientific and political spheres (Miller, 2001). Boundary organizations can help surmount political boundaries as they can bring together people with divergent interests (O'Mahony & Bechky, 2008). They can help address identity boundaries as they produce "mediating actors" able to combine a variety of aspects from the different social worlds they connect (Guston, 2001) and to perform a hybrid role in taking different views into account at the interface between communities (Miller, 2001).

Although boundary organizations can bring about a convergence of interests at the organizational level and facilitate knowledge transformation and subsequently knowledge co-production (Guston, 2001), they cannot always preserve the hybrid identity of the mediating actors they may produce (Miller, 2001), nor maintain these actors' capacity to co-create knowledge (Carlile, 2004: 562-563). Hence, boundary organizations do not guarantee a lasting capacity to address the challenges posed by the coexistence of political, identity, cognitive and material boundaries. In addition,

because successful boundary organizations may come to focus on the goals of one of their two "principals" (Guston, 2001), the connection they provide may not remain stable over time. Boundary organizations remain organizations, and thus subject to the problems that organizations typically encounter. Specifically they are subject to processes of "goal displacement" (Merton, 1957: 199-202) whereby their initial goals may become lost as organizational and technical imperatives come to dominate (Selznick, 1949, 1992).

Boundary community. Recent studies about the research-practice interface focused on identity (Empson, 2013), the import of Bayesian thinking in management (Cabantous & Gond, 2015) converge on the importance of building communities of actors who share a common identity of both practitioners and academics in order to connect both social worlds. Such communities of "engaged scholars" (Van De Ven & Johnson, 2006) or "practitioners involved in academia" aim at developing a hybrid identity to relieve the identity tensions and the related cognitive dissonance they face at the research-practice interface (Empson, 2013). In doing so, they become over time a community set apart from both the research and practice communities yet connecting them.

We suggest labeling these communities based at the overlapping zone of academia and practice as "boundary communities". We define a boundary community as a specific type of community of practice that, through its existence, interfaces distinct social worlds and creates the possibility of knowledge co-creation and management at the boundary. This construct captures some of the neglected identity-related, social and temporal dimensions of the boundary that interfaces distinct communities and is distinct from prior constructs.

First, like “communities of practice”, boundary communities are “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002: 4). Boundary communities develop and maintain a set of core beliefs and provide their members with a sense of belonging (Wenger et al., 2002). Their existence and emergence reflect the construction of a shared ethos and identity by a set of actors operating at the boundary between two communities or sets of organizations. Yet, distinct from other kinds of communities of practice, boundary communities provide their members with beliefs and identities that aim to hybridize elements from distinct social worlds in order to encourage their members to create a convergence between these worlds.

Second, like boundary organizations, boundary communities can enable and facilitate the circulation, use and creation of boundary objects. However, unlike boundary organizations, community membership rules are mainly based on elements of identity such as beliefs and shared values. Hence, they are more like a network: a community cuts across organizational borders and brings together members from distant organizations. A boundary community can emerge from the continuing presence of boundary organizations in a given field, and can potentially ‘give life’ to a series of boundary organizations, as boundary organizations contribute to recruit and enroll members who then become part of the boundary community.

Yet, boundary community members are not tied to the borders of a given boundary organization; they may be involved with one or several boundary organizations, and may also move across those organizations. As with boundary objects and boundary organizations, all communities can potentially become a boundary community in the extent to which it is deliberately mobilized to support the

connection of distinct occupational community through the constitution of a specific hybrid identity.

Building on the premise that 'connecting' boundaries such as boundary objects, boundary organizations and boundary communities help address the tensions generated by the 'separating' material, cognitive, identity and political boundaries, we offer a 'boundary management' framework that specifies how boundaries interact over time.

A BOUNDARY MANAGEMENT FRAMEWORK

It is ironic that, in seeking to theorize about the boundaries that separate and connect researchers and practitioners, we risk reinforcing those boundaries by identifying and dimensionalizing them. Our quest for conceptual specificity encourages us to clearly define each boundary in turn and to develop a comprehensive taxonomy. Yet, as we seek to illustrate each element of this taxonomy, it becomes clear that these boundaries are inevitably blurred and transgressed. A connecting boundary does not simply connect practitioners and academics – it does so by surmounting *multiple* kinds of separating boundaries.

Table 2 provides an overview of our 'boundary management' framework that clarifies how 'connecting boundaries' help manage 'separating boundaries'. In what follows, we illustrate this framework by considering each connecting boundary in turn.

INSERT TABLE 2 ABOUT HERE

Managing Separating Boundaries through Boundary Objects

The *Harvard Business Review* (*HBR*) offers a good illustration of how an object such as a journal can play the role of a *boundary object* and help academics and

practitioners to collectively manage some of the boundaries that separate them. Since its creation in 1922, *HBR* has defined its mission as establishing a bridge between academics and business practitioners by allowing practitioners to access the output of economic and management research, and, in so doing, move toward a "proper theory of business" (Donham, 1922: 1). Schultz and Nicolai (2015) recently argued that *HBR* goes even beyond this initial 'translation' mission by showing that the ideas published in this journal have a significant impact on the scientific discourse of management researchers. These authors conclude that *HBR* does not only operate as a one-way movement of ideas from academia to practice but as a forum by which both communities influence each other in complex manners (see also: Barley, Meyer, & Gash, 1988). *HBR* links academics with practitioners in terms of both the production and consumption of knowledge insofar as both parties contribute to the publication (e.g., academics write articles and practitioners contribute practical short cases, insights and blogs) and both parties consume the content in different ways (via the production of academic insights and practical guidance for managers). In addition, because of the way articles are produced, this journal enables a variety of uses by actors operating in distinct social words: business practitioners can use it to increase their knowledge of recent trends or evaluate critically consultants' advice; academics can rely on it to reach a broader audience, disseminate the managerial implications of a new theory, or advertise new executive education programs. *HBR* also brings academics and senior practitioners together more directly by encouraging them to co-author articles.

HBR thus appears to have the plasticity needed for a device to be used as a "boundary object" (Star, 2010; Star & Griesemer, 1989). When academics and practitioners write and/or read an article published in the *HBR*, they *de facto*

surmount the *cognitive* boundaries that separate them, because the article translates and promulgates academically derived and research based empirical insights into a vocabulary that is understandable by both academics and practitioners. It goes beyond that to create a distinctive communication style and language designed to facilitate this translation of academic ideas. This "shared lexicon" (Carlile, 2004: 558) can enable discussions between academics and practitioners.

The physical properties of *HBR*, which is both available electronically or as a hard copy to be read in the lounge of an airport by a businessperson in a hurry as well as in the research library of a business school, allows academics and practitioners to transcend the *material* boundaries. The use (i.e., both the consumption and production) of *HBR* articles brings them together in physical space (albeit the pages in a magazine rather than through direct physical interaction). *HBR* thus possesses physical attributes that confer on it the flexibility needed to be used across a variety of social spaces used by practitioners and academics.

HBR can also help to manage *identity* and *political* boundaries. Academics who publish in *HBR* signal their practitioner-friendly credentials, with all the potential material rewards from practitioners and associated disdain from their more theoretically purist colleagues (Empson, 2013; Gulati, 2007; Vermeulen, 2007). Similarly, practitioners publishing or co-authoring in *HBR* seek to establish their identity as pseudo-academics, or "pracademics". *HBR* also transcends to a certain extent *political* boundaries, by enabling the competing political interests of both academic and practitioner contributors to be simultaneously satisfied, without either party compromising their interests.

Although an object such as *HBR* can potentially be mobilized as a "boundary object" to manage the four types of boundaries we identified as separating

academics and practitioners, prior studies of knowledge management suggest that boundary objects are particular relevant to addressing cognitive and material boundaries, more so than political and identity boundaries (Carlile, 2002, 2004; Star, 2010). For instance, Cabantous and Gond (2015: 457-458) show how decision analysts have designed numerous decision tools, such as decision trees or tornado diagrams, in order to help managers make decisions in a way that is consistent with Bayesian thinking. When they are consulted as experts to help address real decision problems, decision analysts often use the vehicle of a decision tree to frame the problem and define with local actors its key parameters (Cabantous, Gond, & Johnson-Cramer, 2010). These tools helps surmount cognitive barriers partly because they make practitioners more "receptive" to decision theory concepts – such as expected utility – by presenting them in an "intuitive rather than a mathematical framework" (Engemann & Miller, 1992).

However, the case of decision analysis also shows that even a widely diffused tool (e.g., a decision tree) may fall short of managing all the boundaries separating decision-makers and academics. Failed attempts at collaboration between decision analysts and practitioners point to the limited capacity of boundary objects to deal with political or identity boundaries.

> [A] decision scholar with extensive experience in consultancy work related to environmental and nuclear decisions, reported that […] when dealing with various groups of stakeholders to make environmental or energy related decisions, "a group of people [environmental pressure groups] sometimes reject" decision-theory principles because they are "sometimes worried that you're going to do some sort of hocus-pocus with numbers and lose them in that process and they don't want to lose control of it." […] The collaboration "does not work," and decision theory is eventually not being used to inform decision making because some of the parties involved in the decision have this "sort of 'I am not going to make this statement because I don't believe you can do it,' or 'I don't believe emotions can be reduced to numbers.' (Cabantous and Gond, 2011)

In contexts where political divergences are explicit, and the establishment of a

consensus is a precondition for the pursuit of collective work, the use of "boundary objects" may be irrelevant or simply not possible. This reflects Star's (2010) insistence that boundary objects are mostly useful for understanding how cooperative work between social groups can be engaged "in the absence of consensus" (p. 604). This suggests that in situations where the interests of academics and practitioners *have to* be aligned to start collaboration, boundary *organizations* can be more relevant than boundary *objects*.

Managing Separating Boundaries through Boundary Organizations

The case of the *International Leadership Association* (ILA), an example of organization that plays the role of a *boundary organization*, illustrates how a boundary organization can be used to address political boundaries, and potentially help transcend the other boundaries that separate academics and practitioners.[1] Founded with the explicit mission to "develop and advance leadership knowledge and practice" and to "strengthen ties between those who study and those who practice leadership", the ILA describes itself as "one of the few organizations to actively embrace" and seek to bring together public and private sector leaders, scholars, educators, coaches, consultants, and students.

By giving equal legitimacy to both parties for developing knowledge about leadership, through for instance organizing tracks at the annual conference designed to attract submissions from academics and practitioners alike, the ILA provides legitimacy to actors operating at the interfaces between academics and practitioners. Furthermore, by establishing as its central mission the rapprochement of the worlds

[1] All the quotes from this section about the ILA come from their website: http://www.ila-net.org/about/index.htm. Retrieved on March 27, 2015.

of research and practice, the ILA creates a structure within which academics and practitioners interested in leadership can develop (and maintain) activities that connect the two groups. The ILA thus is an important ingredient in the management of the interface between academics and practitioners because it helps minimize *political* boundaries between academics and practitioners in the field of leadership.

Beyond encouraging academics and practitioners to "do things together", the ILA also provides its members with physical resources that make collaborative projects feasible. For instance, through its annual conference, the ILA provides a material space where representatives of both communities can meet, discuss about their respective interests, and envision collaboration. Hence, this organization supports the design of 'liminal spaces' that enable the fluid encounter of academics and practitioners (Bartunek, 2007). Between conferences the ILA helps maintains ongoing dialogue among academics and practitioners by providing its members with resources to organize webinars, and by supporting the development of affinity groups and learning communities. In making such resources available to its members, the ILA enables academics and practitioners to undertake common activities (Star & Griesemer, 1989). It thus helps reduce the separating *cognitive* and *material* boundaries in the field of leadership research and practice. In so doing, the ILA also partially helps surmount *identity* boundaries, since academics and practitioners have the opportunity to get to know each other better through regular interactions at various events.

Although the ILA case shows that organizations can help manage the four separating boundaries, prior research and empirical evidence suggest that boundary organizations may be more effective at transcending the material and political boundaries than identity or cognitive boundaries (Bechky, 2003b; Empson, 2013;

Guston, 2001; Miller, 2001). One reason for this it that organizations are known to be subject to goal displacement (Merton, 1957). Over time, even organizations that put at the core of their mission the connection between academics and practitioners might evolve towards one community.

Here again, Cabantous and Gond's (2015) historical study of decision analysis provides important insights. As these authors show, decision analysts have designed organizations at the interface of the two worlds of academia and practice and which could operate as boundary organizations. They notably created in 1980 the Decision Analysis Society (DAS), which brings together academics and practitioners interested in the decision analysis field. However, even though the DAS had a true commitment to connecting academics and practitioners in the field of decision making, it nonetheless experienced, over time, a logic of goal-displacement. The academic interests and identity came to dominate the ones of the non-academic members, as this quote from the president of the DAS suggests:

> Some of the non-academic members of the Special Interest Group have expressed concern[s] to me about its heavily academic flavor; they feel that their problems aren't getting enough attention. It is too soon to know what actions are appropriate, [but] it's a good bet that the complaint is justified. We should do something about it, if we can find something sensible to do. (Edwards, 1994, cited by Cabantous & Gond, 2015: 460)

In order to address this concern, a group of practitioners created a new association focused on professionals, the Decision Analysis Affinity Group (DAAG). This case hence suggests that maintaining the right balance between academic and managerial goals over time is difficult. Even organizations which were successfully mobilized as boundary organizations for some time may eventually fail to address separating political or identity boundaries in the long term because they are not free from goal displacement.

The decision analysis case documented by Cabantous and Gond (2015) points to several important lessons. First, this case suggests that the management of the research-practice interface requires the existence of multiple organizations which can play the role of boundary organizations. Second, this study implicitly points to a capacity for constantly renewing the population of "would be" boundary organizations, and suggests that such capacity depends on the work of individuals whose "hybrid" ethos facilitates the permanent connection of the worlds of practice and research in a specific field. These individuals are in a difficult position, since, as Empson (2013) shows, individuals who seek to operate at the overlapping zone of academia and practice experience important identity tensions and may experience forms of cognitive dissonance (Bartunek & Rynes, 2014).

The strength and depth of the identity tensions to be confronted individually in order to maintain successful collaboration (Empson, 2013), and the possible divergence of goals at boundary organizations in the long run, call for the consideration of a complementary 'connecting' entity to ensure lasting collaborations between academics and practitioners.

Managing Separating Boundaries through Boundary Communities

Following Guston (2001) and Miller (2001), we suggest expanding the concept of boundary object to another type of entity – a community, defined as a group of people having in common some identity feature and/or interest – and which we call a boundary community. As with boundary objects and boundary organizations, any type of community can play the role of boundary community to the extent to which it is mobilized in order to bridge at least two other specified communities. A boundary community reflects the importance of sustaining, in the long run, shared values and a

very specific ethos to enable management of identity and political separating boundaries.

We argue that what characterizes a boundary community is the willingness of its members to maintain their 'hybrid identity' that blends some characteristics of the two communities it overlaps – in our case academics and business practitioners – in order to preserve its capacity to operate at the interface of both worlds. Arguably, the concept of "engaged scholarship" proposed by Van de Ven (2007) involves the existence of a community of "engaged scholars" who are knowledgeable of both communities, collectively able to co-produce knowledge, and individually able to cope with the identity tensions involved by their position of boundary-spanner (Bansal et al., 2012; Empson, 2013). If the model of "knowledge co-production" between academics and practitioners is here to last (Van de Ven & Johnson, 2006), preserving a 'pracademic' ethos that hybridize the values of both occupational communities becomes a necessity.

Cabantous and Gond's (2011, 2015) study of 40 years of interactions of academics and practitioners in the decision analysis field illustrates the concept of boundary community and shows how such a community can dynamically address the limitations of both boundary organizations and boundary objects. Over time, decision analysts developed a sense of belonging to a similar community characterized by two firm beliefs: a belief in the value of rational choice theory axioms – that they regard as their "Newton's Laws" –; and a belief in the importance of being prescriptive, i.e., the importance of influencing decision making practice through activities such as consultancy and the design of relevant tools for practitioners. Most decision analysts carefully preserved their hybrid identity through career paths that spanned academic and business positions at corporations or consultancies. Some of them even

decided to leave research centers when these places became too academic-centric in order to create more business focused consultancies. Through their behaviors and by expressing their hybrid research-practice ethos, the members of the community permanently rebalanced the tensions across a variety of boundary organizations, and enabled the management of political and identity boundaries.

As a whole, the case of decision analysis suggests that long term collaborations between academics and practitioners not only require the mobilization of boundary objects and boundary organizations. They also involve the incidental emergence of a new community of actors who are neither academics nor practitioners, yet share an ethos that blends the values and knowledge of both occupational groups and are committed to the maintenance of their boundary spanning role.

Although boundary organizations support the development of boundary communities, it is worth distinguishing these two entities in terms of the different ways in which they can contribute to address distinct elements of the separating boundaries, as shown in Table 2. More importantly distinguishing boundary objects, boundary organizations and boundary communities allows us to consider more systematically their relationships which have been neglected to date. Clarifying these relationships can also help identify the conditions for their successful management for the purpose of balancing separating and connecting boundaries.

Managing Multiple Connecting Boundaries

INSERT FIGURE 1 ABOUT HERE

Figure 1 clarifies some of the key relationships between boundary objects, organization and communities as they emerge from our analysis. The hybrid identity

that characterizes the members of boundary communities emerges from the constitution of boundary organizations and is likely to be nurtured by their common uses of boundary objects (e.g., decision trees in the case of decision analysis, or *HBR*). As a whole, the objects used as boundary objects form a material infrastructure that contributes to coordinating the actions of the members of boundary communities. Boundary organizations can also actively recruit individuals who may become long term members of the boundary community. For instance, the NTL Institute (National Training Laboratories) was founded by Kurt Lewin in 1947 as an organization committed to developing insights into the Applied Behavioural Sciences. As the NTL grew it became a hub for individuals interested in the behavioural sciences and, through the development of an active membership-base made up of academics and practitioners, it operated as a boundary organizations that contributed to generate a boundary community which is sustained by vibrant academic-practitioner interface via workshops, webinars, newsletters, and community spanning publications (i.e. *Journal of Applied Behavioral Science*, *Practicing Social Change*, and *OD Practitioner*). Indeed, the NTL has come to describe itself as the 'NTL Community'. The case of decision analysts also suggests that a boundary community can actively shape boundary organizations, as when boundary organizations deviate from their dualistic goal, their members can actively mobilize their common hybrid identity and take action to restore their "boundary" nature. Boundary communities, in encompassing members of different boundary organizations, can also connect them with others, extending de facto the liminal spaces for encounters between academics and practitioners.

The case of the *Network for Business Sustainability* (NBS) offers an illustration of how boundary organizations can support the development of boundary objects. It

was launched by Pratima (Tima) Bansal, who currently acts as its Executive Director, with the aim of bridging the research-practice gap in the domain of sustainable development. By enabling cooperation between academics and practitioners, the NBS facilitates the creation of "boundary objects" such as the "culture wheel", a framework that synthesizes the whole literature on how sustainability can be embedded within organizations into a simple scheme (Bertels, Papania & Papania, 2010). This framework, and the report within which it is presented (Bertels et al., 2010), constitute objects that can be contextualized to the differentiated need of both academics and/or practitioners (Bansal et al., 2012: 77). Members of boundary communities are strategically located to enable appropriate use of boundary objects (Cabantous et al., 2010), and through their boundary-spanning roles (Bansal et al., 2012) can facilitate the diffusion of objects operating as 'boundary objects' at the sphere of academia and business practice. They can also help connect a variety of boundary organizations operating at the borders of various groups of academics and practitioners. Finally, boundary objects, by enhancing the coordination of social groups having different interests (Star, 2010) can ease the management of boundary organizations (Guston, 2001).

Boundary Organizing: Balancing Separating and Connecting Boundaries

Although our framework focuses on how 'connecting boundaries' can help surmount 'separating boundaries', we do not see the existence of tensions between academics and practitioners as necessary problematic. Separating boundaries can prevent the emergence of successful academic-practitioners collaborations but they also play multiple functional roles in enhancing the maintenance and co-existence of separated types of knowledge. Fragmented spaces enhanced by material

boundaries offer differentiated opportunities for knowledge construction, cultural boundaries can help preserve important features of each community's identity and ethos, political boundaries incentivize actors to invest and focus on the development of a specific type of knowledge (e.g., fundamental vs. applied), and cognitive boundaries may enhance forms of collectively forms of cognitive diversity that may help enhance creativity if managed appropriately.

INSERT FIGURE 2 ABOUT HERE

As illustrated on Figure 2, our dual boundary framework can help identify how to manage or design the interface between both types of boundaries so that an appropriate balance can be attained, which can benefit from the capacity of connecting entities to enhance fruitful collaboration while maintaining a level of separation between both communities. This is a necessary condition if there is to be opportunity for knowledge cross-fertilization and co-creation. In clarifying the interface of connecting and separating boundaries, our framework supports the paradoxical management of research-practice interface (Bartunek & Rynes, 2014) by exploiting the positive and negative effects of both types of boundaries. On the one hand, reinforcing or multiplying 'separating' boundaries can contribute to the production of distinct bodies of knowledge by academics and practitioners, yet it prevents the emergence of conditions enabling academic-practitioner collaboration for knowledge co-production.

On the other hand, reinforcing or multiplying 'connecting' boundaries can facilitate academic-practitioners knowledge co-production and incentivize the development of engaged forms of scholarship, yet this may threaten the long term

capacities of both communities to maintain their know-how, values and specific types of knowledge production.

Accordingly, balancing over time the design and relationships between both types of boundary is necessary for maintaining opportunities for relevant and successful collaborations between academics and practitioners, and sustaining in the long run the co-production of forms of knowledge that are both rigorous and relevant.

IMPLICATIONS AND CONCLUSION

Implications for the Analysis of Boundaries in Management

Having offered a detailed exposition of the role of boundaries in the management of the relationships between academics and practitioners, we believe that our work contributes to the extant literature in four ways. First, it builds upon insights from Bartunek and Rynes (2014) and addresses problems identified in the literature on the research-practice divide by proposing a conceptualization of this divide as a set of dynamically interrelated 'separating' boundaries (cognitive, material, political and identity) and 'connecting' boundaries (boundary object, organization and community). This *boundary management framework* recognizes the multidimensionality of the boundaries that separate research and practice, and specifies how other boundaries can dynamically reconnect academics and practitioners across dimensions. It also helps us understand how to enhance knowledge management between distinct occupational communities and it can support studies of the interactions between a diverse set of communities across a broad range of contexts.

Second, this research contributes to the growing literature on boundaries in social sciences (Lamont & Molnár, 2002; O'Mahony & Bechky, 2008; Mol & Law, 2005) by theorizing the concept of *boundary community* and specifying how such a

community functions. Our analysis identifies the roles of boundary communities in relation to boundary objects and boundary organizations. It offers insights into the processes by which boundary communities address identity boundaries that separate academics and practitioners by allowing the development and maintenance of a hybrid identity. We also consider the ways in which they also reinforce the management of material and political boundaries by supporting the existence and influence of boundary objects and boundary organizations. For us, the concept of boundary community sheds new light on the ways in which occupational communities co-produce knowledge and how it can be applied across a broad range of contexts to study how occupational communities can build the capacity to co-construct knowledge—a problem not addressed by prior work on knowledge management (e.g., Carlile, 2002, 2004).

Third, our conceptualization of the paradoxical nature of boundaries has important implications for prior literature on the 'research-practice divide.' Our work specifies some of the parameters for successful and lasting engaged scholarship. It suggests that efforts to overcome the cognitive boundary can persist only as long as the other separating boundaries (material, political and identity) are considered and deliberately managed at the same time. Our analysis stresses the need to create communities of hybrid members to support knowledge co-creation at the research-practice interface; they also highlights the importance of producing boundary objects and boundary organizations in order to ensure the long-term impact and success of bridging strategies.

Finally, and somewhat ironically given our emphasis on managing paradox, our contribution does not offer a 'solution' to the problem of the research-practice divide. Rather, it hopefully provides a richer and more sophisticated way of thinking about

the problem (i.e. through the articulation of separating boundaries and connecting boundaries) which provides a basis for navigating the complex and ongoing challenges associated with the interface between academics and practitioners (i.e. a focus on 'managing the tensions' rather than 'resolving the tensions').

Implications for the Management of the Research-Practice Interface

The boundary management framework developed in this paper has significant implications for practice, research and policy. Most importantly, because of the mutual implicated and interconnected nature of separating and connecting boundaries, we suggest that in order to address the research-practice divide, academics, practitioners and policy makers have to adopt an approach which is simultaneously holistic and contingent. So, for example, in instances where academics seek to build relationships with practitioners they need to hold in dynamic tension the points of separation (i.e. productively maintaining differences) and the points of connection (i.e. constructively managing the opportunities for collaboration). In effect, this involves collapsing a false binary logic (i.e. 'separation' versus 'connection') and instead requires academics and practitioners to hold in balance these two categories. This balancing process can also be applied to policy formulation. An example of this is the 'impact agenda' for university-based research in the UK where there is a risk that an over-privileging of connecting boundaries (e.g. the need for knowledge transfer and industry-linked collaboration) may inadvertently downplay the importance of separating boundaries (e.g. academic autonomy, productive differences, and independence).

Beyond productively managing the tension between separating and connecting boundaries, there is also a need to consider the interconnectedness *within* these

categories and not just *across* categories. This requires academics, practitioners and policy makers to avoid being overly prescriptive and narrow in their focus. Hence, when considering a specific type of boundary (e.g. a material boundary) as a primary point of intervention it is important to take a systemic perspective and consider the wider implications and unintended consequences for the array of separating boundaries and connecting boundaries. The overriding implication here is not that stakeholders should seek to simultaneously intervene in all area of boundary activity, but rather when they choose a specific point of engagement they should ask themselves what might be the effects and consequences for other areas of boundary activity and seek to accommodate or ameliorate any potentially adverse outcomes. Just as Empson (2013) identified a series of tactics for reconciling identity conflict for academics who seek to cross the research-practice divide (e.g. define conditions for engagement, create identity hierarchy), we should be mindful of the multiple potential cognitive, material, political, and identity challenges involved in working at the boundary of academia and practice and ensure that we have clearly defined tactics available to deal with the problems we are likely to encounter.

Table 1

The Research-Practice Divide as a Set of Separating Boundaries

Type of Boundary	Dimension	Academic community	Practitioner community	Illustrative papers
Cognitive boundary	Language	Technical; esoteric.	In common usage.	Starbuck & Mezias (1996)
	Knowledge	Scholarly knowledge; objective; generalizable; long term; positivist approach.	Practical knowledge; subjective; contextual relevancy; short term; intuitive approach.	Beyer & Trice (1982) Hodgkinson & Starkey (2011); Huff (2000); Rynes et al. (2001) ; Tushman et al. (2007) Shapiro et al. (2007) Shrivastava & Mitroff (1984) ; Van de Ven & Johnson (2006)
Material boundary	Location	University.	Business.	Van de Ven & Johnson (2006)
	Tools	Validity; reliability; accuracy; being scientifically informed.	Usefulness; relevancy; practical value.	Bansal et al. (2012); Ford et al. (2005); Jarzabkowski et al. (2013)
Political boundary	Status and legitimacy	Provided by publication and peer recognition.	Related to the capacity to generate business opportunities.	Empson (2013); Ford et al. (2005); Gulati (2007)
	Incentives	Publication; reputation.	Solving problems; business objectives.	Stern & Barley (1996); Walsh et al. (2007)
Identity boundary	Values	Pursuit of knowledge for its own sake. Pride in elegance of practicing academic craft.	Value creation through addressing unmet needs. Priorities timeliness and effectiveness of response.	Gulati (2007); Lorsch (2009); Shapiro et al. (2007)
	Goals	Have impact through developing robust theory. Impact on colleagues definitely, impact on practitioners possibly.	Have an impact through developing practical solutions. Impact will generate profit or enhance welfare.	Hambrick (2007); Jarzabkowski et al. (2010); Pfeffer (2007)

Table 2
A Boundary Management Framework

Separating boundaries	Connecting boundaries		
	Boundary objects	**Boundary organizations**	**Boundary communities**
Cognitive boundary	• Facilitate the use of theoretical relationships and concepts by practitioners • Provide a language and lexicon to describe problems • Co-construct new understandings of practical problems	• Enable the creation of applied knowledge valued by both types of actors • Consolidate and capitalize existing applied knowledge and can take the responsibility for the dissemination of applied knowledge	• Facilitate the circulation of knowledge across *boundary organizations* • Identify and attempt to resolve issues by creating knowledge
Material boundary	• Mediate at a distance the relationship between academics and practitioners by either connecting them and/or offering a space for interaction • Can help the circulation of academic concepts and theories embedded in the design of boundary objects	• Offer a liminal space for academic-practitioner interaction • Provide incentives to design *boundary objects* • Enhance the use of *boundary objects*	• Enable the circulation of *boundary objects* through identity building • Expand liminal spaces by connecting *boundary organizations*
Political boundary	• Facilitate the reconciliation of divergent interests through processes of exchange • Aids the co-ordination of contrasting and conflicting stakeholder needs by allowing the co-existence of different interests	• Facilitate the reconciliation of divergent interests through processes of negotiation • Incentivize collaboration between academics and practitioners • Provide legitimacy to actors operating at the interface • Define and enhance organizational membership criteria	• Facilitate the reconciliation of divergent interests through processes of mediation • Balance tensions across *boundary organizations* • Manage the symbolic inclusion and exclusion of community members
Identity boundary	• Provide the 'tools of the trade' and support the construction of 'hybrid identity' for engaged scholars and for self-styled 'pracademic' practitioners	• Acculturate actors to the other community (liminal role) • Express the values and paradigms of the boundary community	• Bring hybrid identity into being • Preserve the ethos of hybrid actors (e.g., engaged scholars) • Enhance shared values and paradigm (prescription, axioms, key concepts)

Figure 1
Managing Multiple Connecting Boundaries

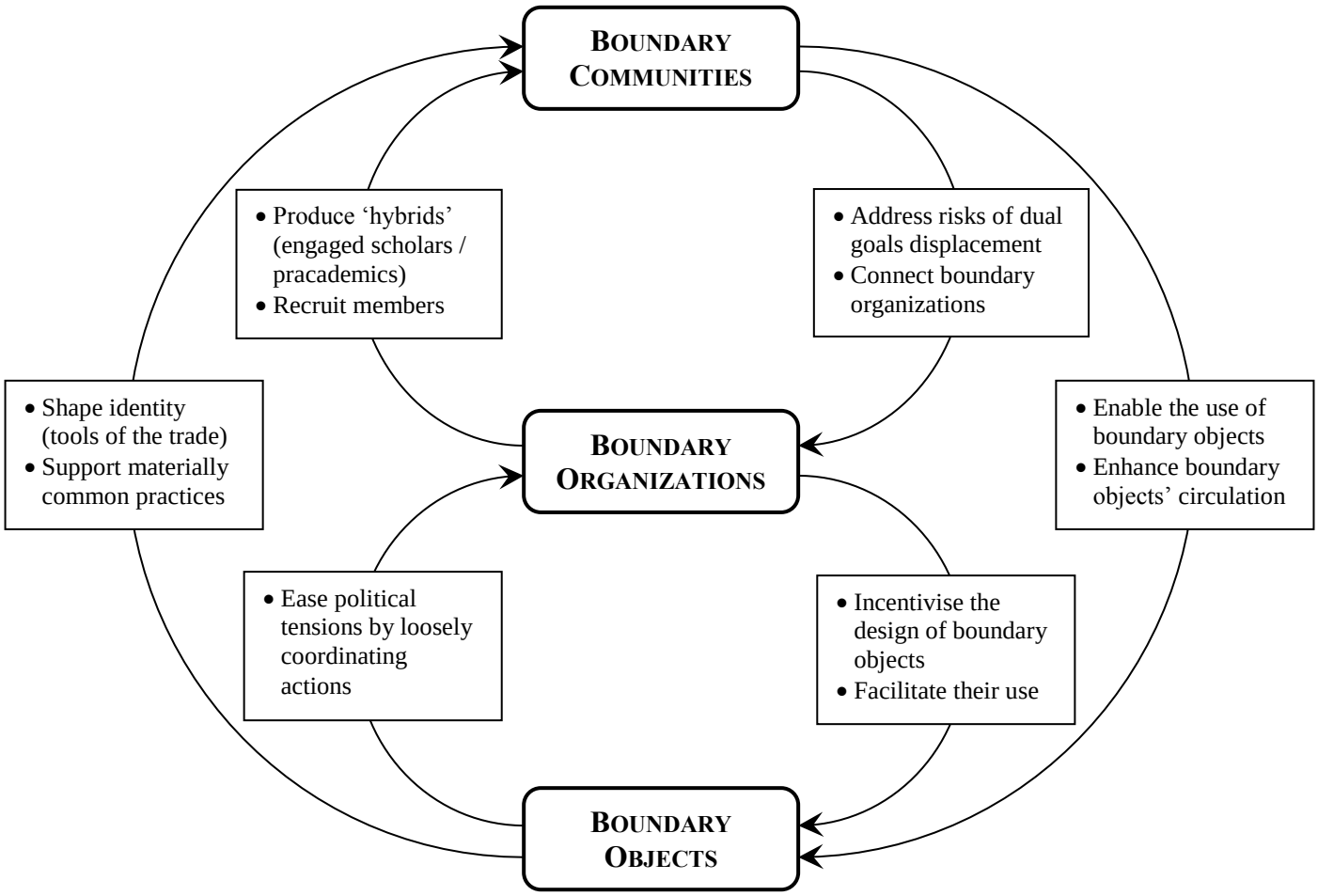
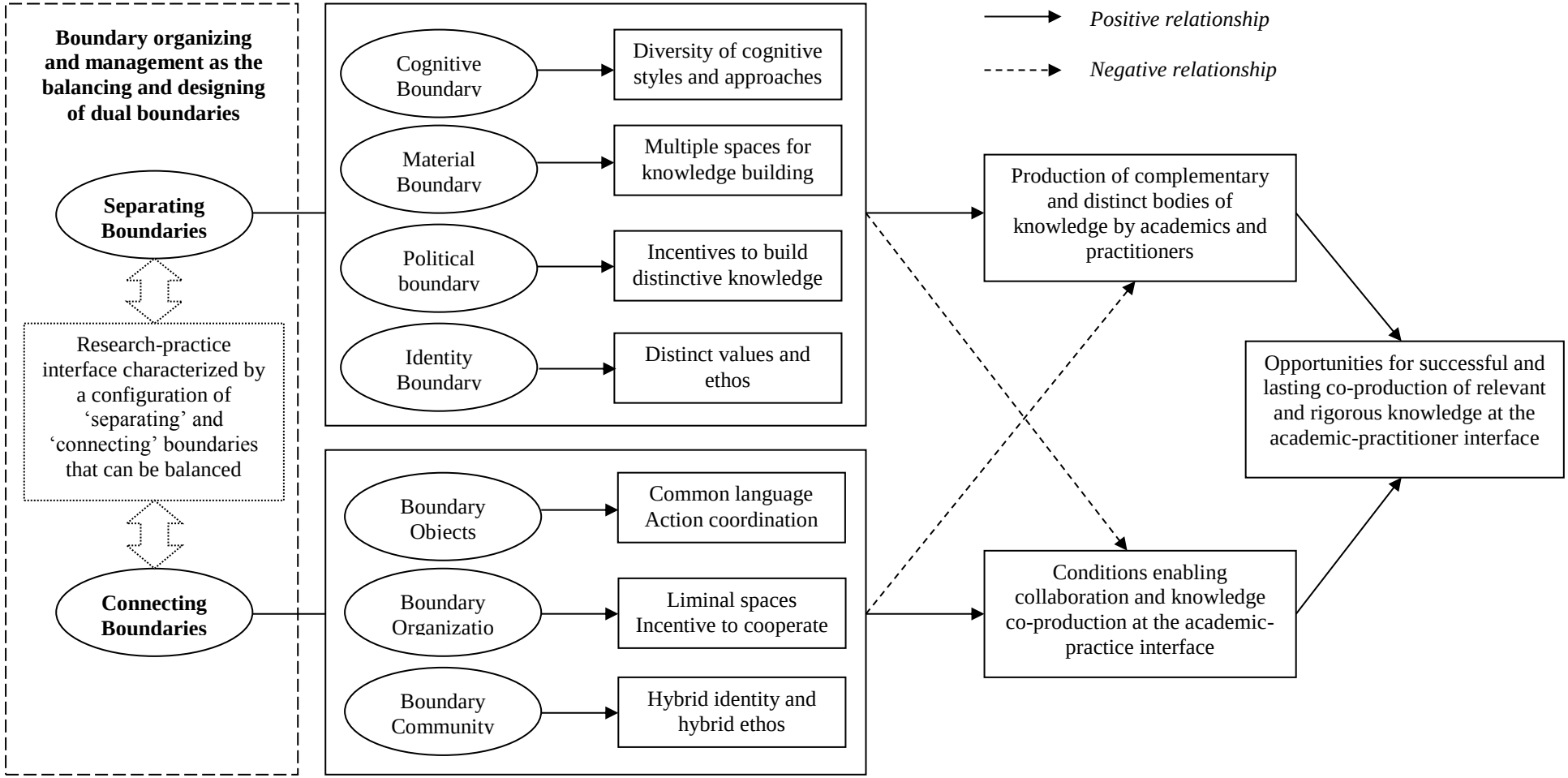


Figure 2
Boundary Organizing: Balancing Separating and Connecting Boundaries



REFERENCES

Abott, A. 1988. *The System of Professions*. Chicago: University of Chicago Press.

Amabile, T. M., Patterson, C., Mueller, J., Wojcik, T., Kramer, S. J., Odomirok, P. W., & Marsh, M. 2001. Academic-practitioner collaboration in management research: A case of cross-profession collaboration, *Academy of Management Journal*, 2: 418-431.

Ashforth, B., Harrison, S., & Corley, G. 2008. Identification in organisations: An examination of four fundamental questions. *Journal of Management*, 34(3), 325-374.

Bansal, P., Bertels, S., Ewart, T., MacConnachie, P., & O'Brien, J. 2012. Bridging the Research–Practice Gap. *Academy of Management Perspectives*, 26(1): 73-92.

Barley, S. R., Meyer, G. W., & Gash, D. C. 1988. Cultures of culture: Academics, practitioners and the pragmatics of normative control. *Administrative Science Quarterly*, 33(1): 24-60.

Bartunek, J. M. 2007. Academic-practitioner collaboration need not require joint or relevant research: Towards a relationship scholarship of integration. *Academy of Management Journal*, 50: 1323-1333.

Bartunek, J. M., & Rynes, S. L. 2014. Academics and practitioners are alike and unlike: The paradoxes of academic-practitioner relationship. *Journal of Management*, 40(5): 1181-1201.

Bechky, B. A. 2003a. Object lessons: Workplace artifacts as representations of occupational juridisction. *American Journal of Sociology*, 109(3): 720-752.

Bechky, B. A. 2003b. Sharing meaning across occupational communities: The transformation of understanding on a production floor. *Organization Science*, 14(3): 312-330.

Beer, M. 2001. Why management research findings are un-implementable: An action science perspective. *Reflections*, 2(3): 58-65.

Bertels, S., Papania, L., & Papania, D. 2010. *Embedding sustainability in organizational culture: A systematic review of the body of knowledge*. London, ON: Network for Business Sustainability.

Beyer, J. M., & Trice, H. 1982. The utilization process: A conceptual framework and synthesis of empirical findings. *Administrative Science Quarterly*, 27: 591-622.

Briner, R. B., Denyer, D., & Rousseau, D. M. 2009. Evidence-based management: Concept cleanup time? . *Academy of Management Perspectives*, 23(4): 19-32.

Cabantous, L. & Gond, J.-P. 2011. On the functioning of boundary communities: How decision analysts turn rational choice theory into practice. Paper presented at the GéPS Seminar, HEC Montreal, October 13th.

Cabantous, L., & Gond, J.-P. 2015. The resistible rise of Bayesian thinking in management: Historical lessons from Decision Analysis. *Journal of Management*, 41(2): 441-447.

Cabantous, L., Gond, J.-P., & Johnson-Cramer, M. 2010. Decision theory as practice: Crafting rationality in organization. *Organization Studies*, 31(11): 1531-1566.

Callon, M. (Ed.). 1998. *The Laws of the Markets*. Oxford: Blackwell Publishers.

Carlile, P. R. 2002. A pragmatic view of knowledge and boundaries: Boundary objects in new product development. *Organization Science*, 13: 442-445.

Carlile, P. R. 2004. Transferring, translating, and transforming: An integrative framework for managing knowledge across boundaries. *Organization Science*, 15(5): 555-568.

Cohen, D. J. 2007. The very separate worlds of academic and practitioners publications in human resource management: Reasons for the divide and concrete solutions for bridging the gap. *Academy of Management Journal*, 50(5): 1013-1019.

Davis, M. S. 1971. That's interesting! Towards a phenomenology of sociology and a sociology of phenomenology. *Philosophy of the Social Sciences*, 1(4): 309-344.

Donham, W. B. 1922. Essential groundwork for a broad executive theory. *Harvard Business Review*, 1(1): 1-10.

Empson, L. 2013. My affair with the "Other": Identity journeys across the research-practice divide. *Journal of Management Inquiry*, 22(2): 229-248.

Engemann, K. J., & Miller, H. E. 1992. Operations risk management at a major bank. *Interfaces*, 22(6): 140-149.

Fleming, P., & Spicer, A. 2004. 'You can checkout anytime, but you can never leave': Spatial boundaries in a high commitment organization. *Human Relations*, 57(1): 75-94.

Ford, E. W., Duncan, W. J., Bedeian, A. G., Ginter, P. M., Rouschulp, M. D., & Adams, A. M. 2005. Mitigating risks, visible hands, inevitable disasters, and soft variables: Management research that matters to managers. *Academy of Management Executive*, 19(4).

Greenwood, R., Hinings, C. R., & Suddaby, R. 2002. Theorizing change: The role of professional associations in the transformation of institutionalized fields. *Academy of Management Journal*, 45(1): 58-80.

Gulati, R. 2007. Tent-poles, tribalism, and boundary spanning: The rigor-relevance debate in management research. *Academy of Management Journal*, 50(4): 775-782.

Guston, D. H. 2001. Boundary organizations in environmental policy and science: An introduction. *Science Technology Human Values*, 26(4): 399-408.

Hambrick, D. C. 2007. The field of management's devotion to theory: Too much of a good thing? *Academy of Management Journal*, 50: 1346-1352.

Heracleous, L. 2004. Boundaries in the study of organization. *Human Relations*, 57(1): 95-103.

Hernes, T. 2004. Studying composite boundaries: A framework of analysis. *Human Relations*, 57(1): 9-29.

Hodgkinson, G., & Starkey, K. 2011. Not simply returning to the same answer over and over again: Reframing relevance. *British Journal of Management*, 22: 355-369.

Huff, A. S. 2000. Changes in organizational knowledge production. *Academy of Management Review*, 25(2): 288-293.

Hutchins, E. 1995. *Cognition in the wild*: MIT Press.

Jarzabkowski, P., Giulietti, M., Oliveira, B., & Amoo, N. 2013. "We don't need no education" - Or do we? Management education and alumni adoption of strategy tools. *Journal of Management Inquiry*, 22(1): 4-24.

Jarzabkowski, P., Mohrman, S., & Scherer, A. 2010. Organization studies as applied science: The generation and use of academic knowledge about organizations. *Organization Studies*, 31: 1189-1207.

Kieser, A., & Leiner, L. 2009. Why the rigour–relevance gap in management research is unbridgeable. *Journal of Management Studies*, 46: 516-533.

Lamont, M., & Molnár, V. 2002. The study of boundaries in the social sciences. *Annual Review of Sociology*, 28: 167-195.

Locke, K., & Golden-Biddle, K. 1997. Constructing opportunities for contribution: Structuring intertextual coherence and 'problematizing' in organizational studies. *Academy of Management Journal*, 40(5): 1023-1062.

Lorsch, J. 2009. Regaining lost relevance. *Journal of Management Inquiry*, 18(108-117).

MacKenzie, D., & Millo, Y. 2003. Constructing a market, performing a theory: the historical sociology of a financial derivatives exchange. *American Review of Sociology*, 109(1): 107-145.

Merton, R. K. 1957. Bureaucratic Structure and Personality. In M. R. K. (Ed.), *Social Theory and Social Structure*: 195-206: Free Press.

Merton, R. K. 1973. *The Sociology of Science: Theoretical and Empirical Investigations*: University of Chicago Press.

Miller, C. 2001. Hybrid management: Boundary organizations, science policy, and environmental governance in the climate regime. *Science Technology Human Values*, 26(4): 478-500.

Mol A.-M. & Law, J. 2005. Boundary variations: An introduction. *Environment and Planning D: Society and Space*, 23(5): 637-642.

Negro, G., & Leung, M. D. 2013 'Actual' and Perceptual Effects of Category Spanning: An Analysis of Critical Ratings of Italian Wines. *Organization Science*, 24(3): 684-696.

O'Mahony, S., & Bechky, B. A. 2008. Boundary organizations: Enabling collaboration among unexpected allies. *Administrative Science Quarterly*, 53: 422-459.

Pfeffer, J. 2007. A modest proposal: How we might change the process and product of managerial research. *Academy of Management Journal*, 50: 1334-1345.

Pfeffer, J., & Sutton, R. I. 2006. *Hard Facts, Dangerous Half-Truths, and Total Nonsense: Profiting from evidence-based management*: Harvard Business School Publishing.

Rynes, S. L. 2007a. Editor's afterword: Let's create a tipping point: What academics and practitioners can do, alone and together. *Academy of Management Journal*, 50(5): 1056-1054.

Rynes, S. L. 2007b. Editor's foreword: Tackling the great divide between research production and dissemination in human resource management. *Academy of Management Journal*, 50: 985-986.

Rynes, S. L., Bartunek, J. M., & Daft, R. L. 2001. Across the great divide: Knowledge creation and transfer between practitioners and academics. *Academy of Management Journal*, 44(2): 340-355.

Rynes, S. L., Colbert, A. E., & Brown, K. G. 2002. HR professionals' beliefs about effective human resource practice: correspondance between research and practice. *Human Resource Management*, 41(2): 149-174.

Rynes, S. L., Giluk, T. L., & Brown, K. G. 2007. The very separate worlds of academic and practitioner periodical in human resource management: Implications for evidence-based management. *Academy of Management Journal*, 50(5): 987-1008.

Schultz A.-C. and Nicolai A. T. 2015. The intellectual link between management research and popularization media: A bibliometric analysis of the *Harvard Business Review*. *Academy of Management Learning and Education*, 14(1): 31-49.

Selznick, P. 1949. *TVA and the Grass Roots; a Study in the Sociology of Formal Organization*. Berkeley: University of California Press. .

Selznick, P. 1992. *The Moral Commonwealth: Social Theory and the Promise of Community*. Berkeley: University of California Press.

Seo, M., Putnam, L. L., & Bartunek, J. M. 2004. Dualities and tensions of planned organizational change. In: M. S. Poole & A. Van de Ven (Eds*.), Handbook of organizational change*: 73-109. New York: Oxford University Press.

Shapiro, D., Kirkman, B., & Courtney, H. 2007. Perceived causes and solutions of the translation problem in management research. *Academy of Management Journal*, 50: 249-266.

Shrivastava, P., & Mitroff, I. I. 1984. Enhancing organizational research utilization: The role of decision makers' assumptions. *Academy of Management Review*, 9(1): 18-26.

Spee, A. P., & Jarzabkowski, P. 2009. Strategy tools as boundary objects. *Strategic Organization*, 7(2): 223-232.

Star, S. L. 2010. This is not a boundary object: reflections on the origin of a concept. *Science, Technology, & Human Values*, 35(5): 601-617.

Star, S. L., & Griesemer, J. R. 1989. Institutional ecology, `translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39. *Social Studies of Science*, 19(3): 387-420.

Starbuck, B., & Mezias, J. 1996. Opening up Pandora’s box: Studying the accuracy of managers' perception. *Journal of Organizational Behavior*, 17(2): 99-117.

Starbuck, B., & Mezias, J. 2003. Studying the accuracy of managers' perception: A research odyseey. *British Journal of Management*, 14(1): 3-17.

Stern, R. N., & Barley, S. R. 1996. Organizations and social systems: Organization theory's neglected mandate. *Administrative Science Quarterly*, 41(1): 146-162.

Sturdy, A., Clark, T., Finchman, R., & Handley, K. 2009. Between innovation and legitimation - boundary and knowledge flow in management consultancy. *Organization*, 16(5): 627-653.

Tranfield, D., & Starkey, K. 1998. The nature, social organization and promotion of management research: Towards policy. *British Journal of Management*, 9: 341-353.

Tushman, M., O'Reilly, C., Fenollosa, A., Kleinbaum, A. M., & McGrath, D. 2007. Relevance and rigor: Executive education as a lever in shaping practice and research. *Academy Management Learning & Education*, 6(3): 345-362.

Van De Ven, A. H. 1997. *Engaged scholarship: A guide for organizational and social research*. Oxford: Oxford University Press.

Van De Ven, A. H., & Johnson, P. E. 2006. Knowledge for theory and practice. *Academy of Management Review*, 31(4): 802-821.

Vermeulen, F. 2007. I shall not remain insignificant: Adding a second loop to matter more. *Academy of Management Journal*, 50, 754-761.

Walsh, J. P., Tushman, M., L., Kimberly, J., R., Starbuck, B., & Ashford, S. J. 2007. On the relationship between research and practice: Debate and reflections. *Journal of Management Inquiry*, 16(2): 128-154.

Weick, K. E., & Roberts, K. H. 1983. Collective mind in organizations: Heedfull interrelating on flight decks. *Administrative Science Quarterly*, 38(3): 357-381.

Wenger, E., McDermott, R. A., & Snyder, W. 2002. *Cultivating communities of practice: a guide to managing knowledge*: Harvard Business School Press.

Yakura, E. K. 2002. Charting time: Timelines as temporal boundary objects. *Academy of Management Journal*, 45(5): 956-970.

Zuckerman, E. W. 1999. The categorical imperative: Securities analysts and the illegitimacy discount. *American Journal of Sociology*, 104(5): 1398-1438.

Zuckerman, E. W., Kim, T.-Y., Ukanwa, K., & von Rittmann, J. 2003. Robust Identities or Non-Entities? Typecasting in the Feature Film Labor Market. *American Journal of Sociology*, 108: 1018-1075.