

Please cite the Published Version

Palmer, M, Medway, D  and Warnaby, G  (2017) Theorizing temporary spatial clusters and institutional boundary-work in industrial marketing. *Industrial Marketing Management*, 61. pp. 104-113. ISSN 0019-8501

DOI: <https://doi.org/10.1016/j.indmarman.2016.06.010>

Publisher: Elsevier

Version: Published Version

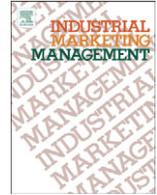
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Theorizing temporary spatial clusters and institutional boundary-work in industrial marketing



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ARTICLE INFO

Article history:

Received 1 May 2016

Received in revised form 20 May 2016

Accepted 15 June 2016

Available online 7 July 2016

Keywords:

Temporary spatial clusters

Institutional boundary-work

Relational space

Business events

Trade fairs

ABSTRACT

To better understand the nature of temporary spatial clusters (TSC's) in industrial marketing settings, this conceptual paper first provides a theoretical synthesis of spatial understanding from the industrial marketing (IM) and economic geography (EG) fields, focusing particularly on Doreen Massey's work on relational space. This leads to a conceptual schema for organizing the IM literature in terms of spatiality, and which also helps clarify the ontological nature of TSCs. We then move to introduce the notion of institutional boundary-work, drawing on the work of Thomas Gieryn, and Andrea Brighenti's examination of territorology, to conceptualize the activities of market actors engaged in the ongoing social accomplishment of TSCs. Such activities, we suggest, involve these actors 'marching' boundaries to assume network influence and maintain market order in IM settings. In summary, therefore, our paper addresses two fundamental questions: i) How do we conceptualize the form of TSCs in IM settings? And, ii) what function(s) are TSCs performing (and how is this being undertaken) in IM? The paper closes by providing methodological guidance for how a research agenda on TSCs within IM activity might be developed, followed by a summary of the managerial implications that emerge from our theorizations.

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1. Introduction

Spatial and temporal perspectives on business relationships have been discussed for some time in the industrial marketing (IM) literature (Andersson & Mattsson, 2010; Araujo & Easton, 2012; Håkansson & Lundgren, 1997; Halinen & Törnroos, 1995; Halinen, Medlin, & Törnroos, 2012; Hedaa & Törnroos, 2008; Medlin, 2004; Tidström & Hagberg-Andersson, 2012). Equally, in economic geography (EG) there have been efforts to theorize the spatiality of industrial markets (Brenner, 1999; Conradson, 2003; Ettlinger, 2004; Faulconbridge, 2006; Gertler, 1995; Glennie & Thrift, 1996; Hughes, 1999; Marsden, Harrison, & Flynn, 1998; Murphy, 2003). However, the fields of IM and EG are rarely integrated, aside from a few exceptions (see Halinen et al., 2012; Nicholson, Brennan, & Midgley, 2014; Nicholson, Tsagdis, & Brennan, 2013). Indeed, much of the intellectual complementarity and potential cross-fertilization between these two areas remains unexplored (see Palmer, Owens, & Sparks, 2006). We suggest that this is especially the case when considering temporary networks of actors in business settings; a phenomenon that others broadly identify as undertheorized (Rinallo & Golfetto, 2011).

In IM, such temporary arrangements have been referred to as 'event-based business networks' (Hedaa & Törnroos, 2008), and in EG, the term 'temporary spatial clusters' (TSCs) (Rinallo & Golfetto, 2011) has been used, which we also adopt in this paper. This contrasts with more permanent networks of market exchange recognized by IM and EG scholars in the form of inter-firm and actor agglomeration, typically within the context of innovation and knowledge clusters (see, for example, Bathelt, Malmberg, & Maskell, 2004; Corsaro, Ramos, Henneberg, & Naudé, 2012; Pinch, Henry, Jenkins, & Tallman, 2003). In their most visible and material form, temporary spatial clusters would include the gathering of IM actors at trade fairs, exhibitions and conventions (Bathelt & Schuldt, 2008; Maskell, Bathelt, & Malmberg, 2004, 2006; Sarmiento, Simões, & Farhangmehr, 2015); supplier workshops (Palmer, Simmons, Robinson, & Fearn, 2015); planned round-table discussions, presentations, industrial buyer visits and facility tours (Palmer & O'Kane, 2007); corporate hospitality functions (Bennett, 2003; Crowley, 1991); and scientific or technical conferences or festivals (Bultitude, McDonald, & Custead, 2011). However, our paper demonstrates that any understanding of TSCs needs to be far more nuanced and complex, incorporating abstract as well as tangible elements.

We suggest that IM and EG literatures can be combined to provide a new lens through which to explore spatiality and, specifically, TSCs within IM settings. The discussion initially identifies one of strengths of the IM literature: its tradition of understanding network relationships 'beyond the dyad' (Håkansson & Johanson, 1992), and how issues of

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space and time have been considered in this respect. Despite such insights, it is argued that the literature remains relatively silent on TSCs, not only in terms of what such spaces consist of and the nature of their actor interactions, but also the actual work undertaken therein. We believe TSCs have an ability to shape and facilitate wider business relationships in IM settings, and posit that they can be better understood through the application of geographical theory in the form of Doreen Massey's ideas on relational spatiality (Massey, 2005), as well as concepts from social theory which help inform the notion of institutional boundary-work – specifically the work of Thomas Gieryn (Gieryn, 1983, 1999) and Andrea Brighenti (Brighenti, 2010). In undertaking such a synthesis we address two fundamental research questions: i) How do we conceptualize the form of TSCs in IM settings? And, ii) what function(s) are TSCs performing (and how is this being undertaken) in IM? Our work therefore responds to recent calls in IM for stronger theory development (Möller, 2013).

To summarize, there is a relative absence of discussions regarding TSCs in existing IM research, and the work of Massey, Gieryn and Brighenti is, we suggest, critical to developing theory and understanding in this area. As such, our paper makes a number of contributions. The first is identifying that for a fuller understanding of the formation and development of relational exchanges in IM settings, we should examine those interstices of spatial interaction (both material and abstract) that evade rigid temporal fixing. Bringing space into IM in this manner theoretically spans and links many unseen, and often seemingly mundane, institutional arrangements as sites for network influence and market order.

Second, we build on Hedaa and Törnroos' (2008: 324) idea that "event networks are time-based connected event relationships", by providing a theoretical distinction between the temporal and the temporary in respect of space within IM settings. This extends a line of work (see Corsaro & Snehota, 2012; Tidström & Hagberg-Andersson, 2012) implying temporariness and, arguably, 'space on the move'. Temporariness brings to the fore the idea of layers of motion and the spatio-temporal waxing and waning of TSCs through the simultaneous mechanisms of deterritorialization and reterritorialization, as discussed by Brighenti (2010), and resulting from the interactions between IM network actors.

Third, we provide a conceptual schema for organizing the IM literature that addresses issues of space and which clarifies the ontological nature of TSCs. This schema presents the idea of tall spatial ontologies, where the micro-level depends hierarchically on larger macro structures or systems, versus flat spatial ontologies, in which the network relationships can be conceived as stretching out sideways or horizontally (Schatzki, 2010). The schema also presents a way of thinking about IM relationships beyond spatial imagery that is fixed, or what can be referred to as a 'sedentary logic', and considers space in a more mobile sense incorporating a 'nomadic logic' (Bauman, 2000; Cresswell, 2006; Deleuze & Guattari, 1987).

Lastly, our paper provides a fine-grained theoretical analysis of the specific workings and related dynamism in an IM network in terms of TSCs. The insights relating to institutional boundary-work open up new ways of understanding the activities of market actors engaged in the ongoing social accomplishment of TSCs. This, we suggest, involves actors 'marching'¹ boundaries to assume network influence and

maintain market order in IM settings, by way of organizing, working, reproducing and maintaining those market institutions (Palmer & O'Kane, 2007; Palmer et al., 2015).

We begin with a brief overview of the work in IM on space and time. Subsequently, we integrate a specific stream of EG research – Doreen Massey's ideas on relational space – to help develop an understanding of TSCs. A synthesis of both the IM and EG fields is then provided, along with a conceptual schema for organizing the IM literature that addresses spatiality. Following this, Thomas Gieryn's notion of boundary-work and Andrea Brighenti's discussion of territorology are outlined to better understand the institutional boundary-work undertaken in TSCs. Finally, we provide some methodological suggestions on how TSCs may be effectively researched by IM scholars, along with some managerial implications from our theoretical analysis.

2. Perspectives on space and time in industrial marketing research

The specific characteristics of business markets – where exchange transactions occur between networks of business actors (typically buyers and sellers) – are well documented in the IM literature, particularly through the work of the Industrial Marketing and Purchasing (IMP) Group (Axelsson & Easton, 1992; Håkansson & Johanson, 1992; Håkansson & Snehota, 1989). The spatiality of these industrial networks within which network actors might be co-located, has, for the most part, been approached from a Cartesian and bounded perspective, in the context of, inter alia, countries (Baum, Calabrese, & Silverman, 2000), regions (Eklinder-Frick, Eriksson, & Hallén, 2011, 2012; Fischer & Varga, 2002) and science parks (Corsaro et al., 2012). Beyond this line of work, the IM tradition has, in some cases, taken interest in more nuanced understandings of space. For example, work on position in industrial networks (Henders, 1992; Mattsson & Johanson, 1992) hints at the relational space that can emerge through the vectorial interplay of actors in different network positions. Additionally, another area of work on network horizons (see, for example, Anderson, Håkansson, & Johanson, 1994; Holmen & Pedersen, 2003; Salmi, Havila, & Anderson, 2001) employs an inherently spatial metaphor to 'get to grips' with the idea that actors within business networks have a bounded knowledge, awareness and understanding of their relationships with others, the limits of which represent a given actor's network horizon, and beyond which the wider business environment (in which individual actors are not identified) begins. There are similarities here with more recent work on network pictures, which visually capture mental configurations of relational space (Colville & Pye, 2010; Henneberg, Mouzas, & Naudé, 2006; Mouzas, Henneberg, & Naudé, 2008; Rohrmus & Henneberg, 2006), although usually at a given point in time (eschewing a more overt longitudinal temporal perspective). More recently, Nicholson et al. (2013) have acknowledged the importance of relational space in their development of notions of relational proximation (and distanciation and isolation) to examine actor relationships in IM networks. Overall, however, the IM literature appears to favor Cartesian conceptualizations of space, where it might be conceived of as a surface, and equated with maps, grids or landscape (Massey, 2005), rather than treating space from a more relational perspective.

Time is often considered alongside space in the IM literature. For example, Henders (1992); cited in Anderson, Havila, Andersen, & Halinen, 1998) recognizes that the spatiality of IM actors' network positions can have a dynamic dimension as the nature of their interactions shift temporally. There is also an increasing body of conceptual and empirical work (Andersson & Mattsson, 2010; Araujo & Easton, 2012; Corsaro & Snehota, 2012; Halinen et al., 2012; Halinen & Törnroos, 1995; Hedaa & Törnroos, 2008; Medlin, 2004; Tidström & Hagberg-Andersson, 2012) within the IM literature stream that clearly addresses how space and time dimensions simultaneously shape network outcomes. Medlin (2004) refers to time as a container for business relationships as well as a measure. Andersson and Mattsson (2010) refer to temporality in terms of resource adjustment to business lifecycles. Araujo and

¹ We adopt the term 'marching' in the usual sense of the verb. However, we would also like to make a link to the noun 'march', derived from the Old English word *mearc*, denoting a borderland or 'sign of a boundary' between two centers of power, which might itself be disputed. Thus, our specific use of the term marching represents an understanding that boundaries that are marched need not be absolute or exclusively defined, and that they do not necessarily relate to unchanging or fixed spatial understandings. Rather, we are attempting to emphasize the malleable possibilities of boundary marching practices that may be passive, unconscious or automatic; producing signs of demarcation that are less visible or traceable, but are nonetheless manifest. Put differently, a boundary only becomes a boundary in relation to the people or actors who actively (re)create and experience it. Thus, we argue boundaries are socially constructed through marching practices.

Easton (2012) posit temporality as a dualism (e.g. A vs. B times series, tensed and untensed time, kairós vs. *chronos* time, subjective vs. objective time). Some research in IM also develops the idea of the temporary, in terms of the business networks formed around trade fairs (Hedaa & Törnroos, 2008), or those centered around short-term innovation projects and initiatives (Araujo & Easton, 2012) and field-configuring events (Lampel & Meyer, 2008). Others identify networking activity related to defined interaction periods (Ramos, Henneberg, & Naudé, 2012), highlighting a distinction between enduring and 'interimistic' relational exchanges (after, Lambe, Spekman, & Hunt, 2000).

There is, therefore, a broad distinction that can be drawn from the IM literature, between i) time as a continuum, i.e. the *temporal*, relating most closely to notions of clock time, and ii) time as a bounded entity or vessel, as in an occurrence with a start and end point, i.e. the *temporary*. It follows logically that both are inherently connected, as time-bounded, temporary occurrences or events happen within the context of an ongoing temporal continuum of passing time, like beads on a string (Corsaro & Snehota, 2012; Tidström & Hagberg-Andersson, 2012). This interplay is not commonly examined within the IM literature, although Hedaa and Törnroos (2008) recognize that business networks forged within the context of time-bounded, temporary or 'temporally specific' events (e.g. trade fairs), can also have a longer-lasting temporal manifestation as those business networks formed develop (i.e. grow, fade, decay, mutate) through further events. In this manner, events (the temporary) characterized by different positions in time and space may be interconnected to form 'event networks' (the temporal). Whilst this IM research starts to inform, in part, our first research question of how we might conceptualize the form of TSCs in IM settings, we also need to engage with the economic geography field.

3. Economic geography and temporary spatial clusters

The concept of space has been debated and discussed for some time within EG. In fact, there is a substantial literature on the role and ontology of space (see Yeung, 2005a, 2005b for an overview). In this section, we draw on Doreen Massey's ideas of *relational* space, which move away from conventional Cartesian understandings (Massey, 2005). Massey's work provides a particular understanding of the ontologies of space as a social and relational sphere, in terms of the ways that we and others (past and present) create it through our vertical interrelations and the role of macro structures or systems in this ongoing process - e.g., cultures, economies, technological regimes or dominant discourses (see Massey, 1984/1995, 2004, 2005). Massey's insights into relational space arguably signpost a number of aspects to be considered where relationships in IM networks are concerned: i) their degree of materiality and abstraction; ii) the social status or positions of their actors; iii) the relative homophily of those actors; and iv) motion and fluidity in the relationships. Such aspects are critical in further conceptualizing the essence of TSCs in IM networks, and are examined in more detail below.

3.1. Materiality and abstraction

The notion of relational space first focuses attention towards the degree of materiality of TSCs in IM contexts. Such materiality is grounded within spatial layers (e.g. a set location, node or venue) of sociomaterial entanglement, but also in a socioarcheology of mobility (Carlile, 2015) - that is, interpreting materiality not only as a spatial "sedimentary image, but also that some layers change at different rates and so are more or less durable relative to another" (Carlile, 2015: 25). Examples of TSC materiality can occur at the inter- and intra-organizational level, and might include, but are not limited to, the exhibition of new technologies and new products, presentations of marketing plans or reports, and meetings and conferences. The latter, in particular, emphasizes notions of 'the temporary' in spatial materiality, in accordance with a "neo-tribal need of periodically meeting and interacting with similar others"

belonging to different organizations or institutions (Borghini, Golfetto & Rinallo, 2006: 1156). Rinallo, Borghini and Golfetto (2010: 254) have defined these events as "relational experiences in a ritualised context", having considerable theoretical resonance with Cova and Salle's (2000) ideas on project marketing, where there is a ritualistic imperative for maintaining the 'sleeping relationship' with the client, directly or indirectly, during the latency period between projects. Spatial materiality could also refer to physical spatial surroundings, such as perceived quality of conference facilities, work-sites or offices, and even the spatial realm of transport in terms of the provision (or not) of luxurious company cars or business-class flights. There are also places of intermittent materiality through, for example, Skype and video conferencing (Schatzki, 2010), as the participants involved are present within the material space of, say, a room, but only for the duration of the call.

We suggest, however, that some material forms of the TSC might also occur which lack the formal or planned institutional arrangements discussed above. TSCs thus entail distinct 'mobile' social spaces that orchestrate ephemeral nodes of potential marketing exchange, at both the inter-organizational level - evident, for example, in train stations, hotels, motorway services, resorts, airports, leisure complexes, cosmopolitan cities and university conference facilities (e.g., see McNeill, 2009) - and at the intra-organizational level - for example, unplanned interactions in the photocopier room and chance discussions around water coolers (Fayard & Weeks, 2007), or even in staff toilets. This emphasizes that there are multiple mobilities and interactive bases for TSC materialities involving "cars, trains, buses and the underground, ...airplanes, taxis and hotels, [and... based on] phones, faxes, answering machines, voicemail, video-conferencing, mobiles, email, chat rooms, discussion forums, mailing lists and web sites" (Wittel, 2001: 69). Such ideas also point to the potential for motion and fluidity in TSCs discussed below.

Turning to the abstract dimension, this is where notions of the TSC shift from having some degree of spatial fixity, to represent the space which emerges as a consequence of the complex, ever-changing and episodic interactions between actors within networks of IM exchange, at the intra- or inter-organizational level, and sometimes simultaneously. Spatial fixity emphasizes physical 'blocks' of space premised upon the production of relatively immobile configurations of relational networks (Brenner, 1998), such as technology hubs. By contrast, Massey's (1984/1995, 2004, 2005) notions of relational space, and also Dale and Burrell's (2008) 'lived space', capture a more abstracted perspective, emphasizing how relational space emerges from ongoing material discussions, negotiations and dialogues between network actors as they shift and flow from one space-time context to another. Who takes part in such dialogues, and who does not, may be related to the issue of institutional boundary-work, discussed below.

Thus, we propose that material and abstract readings of the TSC within IM networks are different ways of spatially conceptualizing the time-bounded interactions between network actors. Their key difference lies in spatial fixity. In this respect, material understandings of the temporary spatial cluster (formal or informal, planned or unplanned) acknowledge the importance of actor interrelations, but set these within the spatial boundaries or limits of the event/location(s) in which those relations are played out, and in this respect the material dimension is rooted within some form of place. In the abstract dimension, by contrast, space is produced from the vectorial interplay of actors within networks of IM exchange. However, there may be dynamism when temporary spatial clusters move beyond the spatial boundaries of an event or location and continue in the realm of purely relational space, thereby shifting from material to more abstract dimensions, and emphasizing permeability between the two - a point again captured below in discussions regarding motion and fluidity.

3.2. Social status or positions of actors

Interpreting space as a product of actor interrelations opens up an essential line of enquiry relating to the identity, social position and the

status of all the various actors involved and how this might shape the interrelations themselves (Massey, 1984/1995, 2004, 2005). Moreover, the fact that only selected actors can attend, or accommodate, certain spaces (e.g. only those in high-status positions are typically found in a business class lounge, and only company executives are usually present in board meetings) is simultaneously indicative of their status, yet also confers further status upon them. In this sense, IM spaces reflect, but also facilitate, the *power* – and *resistance* – of their various actors. Related to this idea is Lefebvre's (1991) work on the social production of space and 'emplacement', where there are "rightful and wrongful places for different categories of people" (Dale and Burrell, 2008: 53). Put differently, space can affect social actors' interactive activity through mechanisms such as: *enclosure*, *partitioning* and *ranking* (Lefebvre, 1991).

Enclosure refers to the designation of spaces for particular purposes, and thus the inclusion of particular groups and the exclusion of others (e.g. selected invites to a product demonstration). Partitioning refers to how actors are often located in specific spaces and in ways that either facilitate or prevent communication between others (e.g. the physical bringing together, or separation, of production line and management employees within a factory). Ranking orders individuals across space in terms of their relative position and hierarchy within a network of relations (e.g. a VIP area at a trade show which is only for board-level executives). The above discussion raises questions regarding the nature of the power held by certain social actors when envisioning and accomplishing new projects, business models, technology possibilities, or disruptive market developments in IM spaces. In summary, through the interaction of their social and spatial positions, actors can have the ability to influence the behavior of people – and in an IM context this could affect a variety of decisions and actions which have a spatial and, in many cases, a temporal, dimension – the most obvious being entry into a new geographical market or further expansion within an existing one, or even market withdrawal.

3.3. Relative homophily

Relative homophily in relational space refers to the ability of some actors to build strong connections with others sharing the same interests, occupational jargon and objectives (Rinallo & Golfetto, 2011). Such common ground can be referred to as the *homophily principle*, or the idea that "contact between similar people occurs at a higher rate than among dissimilar people" (McPherson, Smith-Lovin and Cook, 2001: 416). This resonates with the notion of an 'institutional arrangement', reflecting some kind of 'family resemblance', internal consistency, a familiarity of routines, work and settings, and a similarity amongst the interests, privileges and responsibilities of actors. For example, Isett, Mergel, LeRoux, Mischen, and Rethemeyer (2011) highlight how informal networks tend to connect actors with strong cultural and interest-based affinities, whilst excluding others to avoid conflict. Homophily can therefore deliver access to relational space for some actors, but only if they are perceived as resembling the homophily. Thus, as Engstrand and Stam (2002: 360), quoting Portes and Landolt (1996), explain, "the same strong ties that help members of a group often enable it to exclude outsiders". The homophily principle therefore tends to naturalize inter-relations in terms of the distribution of power, privilege and inequality, thereby helping to legitimate existing structures (and relational spaces) of domination (Tinker, 1986). We will see below how homophily is critical in understanding the practice of institutional boundary-work in the TSCs of IM networks.

3.4. Motion and fluidity

In terms of motion and fluidity, although the IM literature highlights the importance of developing network interactions for the purposes of building relationships and trust amongst network actors, the potential spatial dynamism of those interactions is not easily captured. For

example, IMP work on network pictures mainly gives the impression of a spatial and temporal fixity, as a picture is by its nature a static entity – although a few IM researchers have discussed how network dynamism may affect the pictures of individual actors (Ramos et al., 2012; Öberg, Henneberg, & Mouzas, 2007). For the most part, therefore, spatial understanding in IM remains nested within networks, in which the production of space occurs. Massey's insights problematize this sedentary logic in extant spatial theory. Sedentarism has also been critiqued, in respect of a broader literature on institutional forms and exchanges, for treating stability and place as normal, and distance, change and placelessness as abnormal (Brenner, 1999; Faulconbridge, 2006; Glennie & Thrift, 1996; Marsden et al., 1998).

This shifts the thinking about IM networks towards ideas of motion and fluidity, where the speed of movement of people, money and information is paramount (Bauman, 2000). In such instances the ideas of motion and fluidity extend beyond supply chain efficiency and product delivery. As Dacin, Munir and Tracey (2010: 1394) note, institutions are "...malleable yet firm, somewhat illusory yet recognizable, and fleeting as well as permanent." TSCs in IM networks often demonstrate this movement. Thus, the relational space that emerges in the material dimension of a trade show or supplier workshop may continue both during and after the event in more abstract dimensions (i.e. in the purely relational space which emerges as relevant IM actors begin forming, declaring and building various bonds of exchange through an ongoing discourse that is not immediately tied to a location or event). In this sense, the TSCs can be rendered an extremely malleable and fluid concept, characterized by the episodic and dynamic networks of actor relationships that wax and wane within and between layers of materiality (formal/informal) and abstracted forms, and consequent levels of visibility. As such, the relational space of IM networks is always on the move or 'in production' (Massey, 2004: 12), thus befitting a nomadic rather than sedentary logic.

4. Bridging industrial marketing and economic geography perspectives

Before theoretically deepening the discussion on TSCs, it is helpful to summarize the ontological parameters in the IM and EG fields. In recent years the IM literature has paid greater attention to matters of both space and time. In terms of the former, although IM research appears to favor conceptualizations of space from a Cartesian and bounded sense, the network position, network horizon and relational proximation concepts point towards a more abstracted and sophisticated view of the active role that space may have to play in IM. However, this is arguably not explored to its full potential. Thus, we suggest, not enough attention is given to the 'where' question in IM research, particularly in terms of the spatiality of a given network relationship between actors, and the 'consumption' by those actors of the spaces in which that relationship is maintained and reinforced through interactions. And, whilst some researchers (Nicholson et al., 2013) have helpfully started to draw attention to the potential importance of such relational space in IM settings, they still discuss this in respect of its 'recursive interplay' with more fixed notions of space in terms of geographical proximity and co-located actors.

Work drawn from the EG tradition also provides insights into space as a 'relational territory'. This can take a material form grounded in a Cartesian understanding of the place in which IM exchange takes place – see for example, spatial clustering research on knowledge creation (Maskell et al., 2004; Rinallo & Golfetto, 2011). However, the work of Massey (1984/1995, 2004, 2005) emphasizes a more abstract form of spatiality – decoupled from physical place, but manifest within 'a space' that emerges as a consequence of the constitutive elements that are constantly enacted, mobilized and reworked between social actors (Massey, 2005).

Turning to the influence of time in the IM literature, we have shown this is perhaps more deeply explored than the concept of space (see

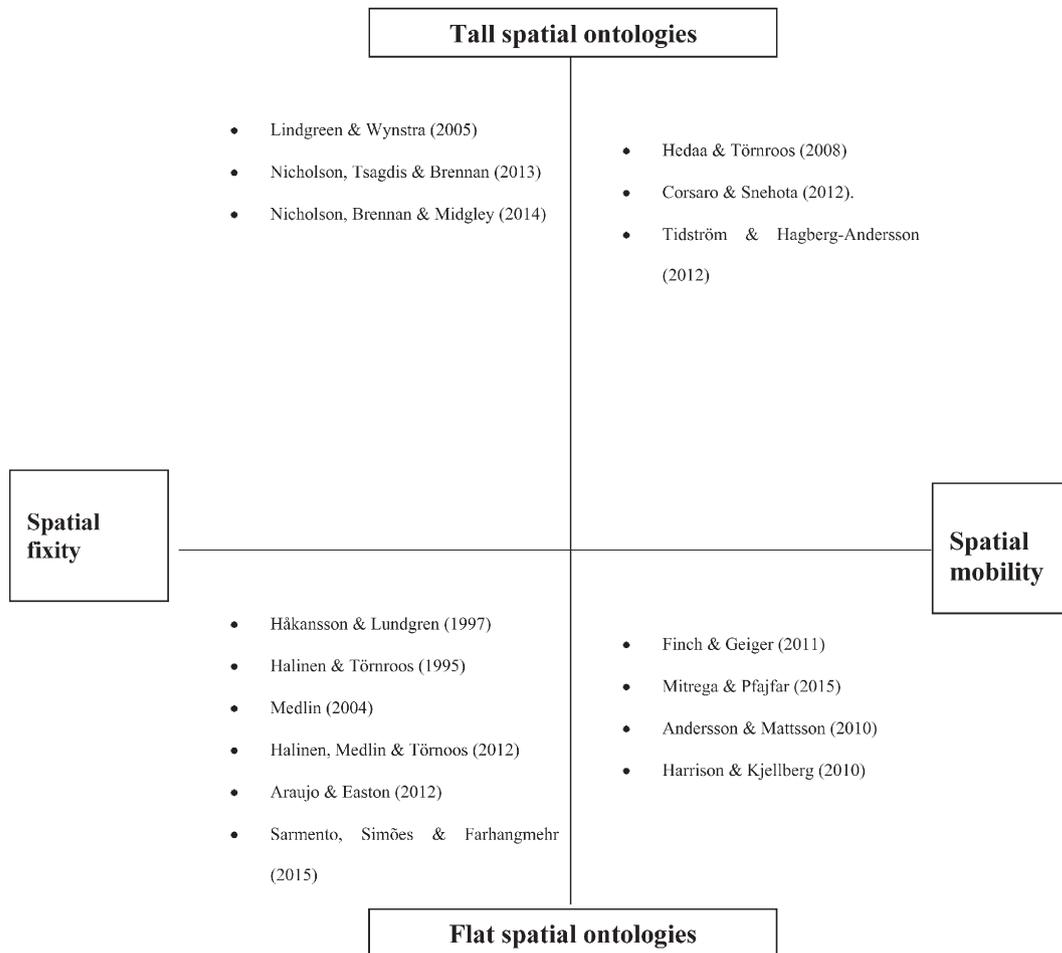


Fig. 1. An organizing schema for the IM literature addressing spatiality.

Araujo & Easton, 2012), although the notion of temporariness is, conversely, a phenomenon still receiving little attention, and the potential links between temporality and temporariness are, aside from a few exceptions (Corsaro & Snehota, 2012; Hedaa & Törnroos, 2008; Tidström & Hagberg-Andersson, 2012), largely ignored. Furthermore, there appears to have been less success at bringing notions of time and space together in the IM literature, and particularly in understanding temporary occurrences of the space or TSCs in which IM exchanges and actions might be played out.

EG also offers a theoretically rich way of understanding time through temporariness and the quickening of liquidity within some realms, but also in terms of the patterns of concentration that create temporary clusters of connectivity, centrality, and empowerment (Amin, 2002; Bauman, 2000; Brenner, 1999; Law, 2006). Here, temporariness encompasses a pattern of retentions from the past and protentions for the future (Massey, 2005). Thus temporality and historicity are not opposed, but rather merge and fuse together in the experience of those who, in their activities, carry forward the process of social practice. Notwithstanding the distinct ontological approaches in IM and EG, both fields offer complementary insights.

A schema for organizing the IM literature addressing spatiality is seen in Fig. 1. This places examples of key IM studies that discuss spatiality on two axes, based (vertically) on spatial awareness, or tall vs. flat spatial ontologies (Schatzki, 2010), and (horizontally) on fixed vs. mobile spatial imagery, which is connected to time. IM literature from the flat ontological perspective tends to adopt the spatial vocabulary of 'networks', 'constellations', 'ecologies' and 'relationships', whilst that assuming a tall ontological position is associated with a vocabulary of spatial 'structures' and 'systems', and linked with terms such as

'macro', 'societal' or 'levels'. Tall ontological approaches therefore recognize that for networks of exchange interaction to be recursively related through space, the interactional interplay of network actors and institutions must be able to link across various types and scales of social environment (Schatzki, 2010). In the practice of TSCs, for example, an illustrative example of the tall ontological realm is the recent call for half-day conference on "Business Rates in Northern Ireland: The Case for Change"². This will comprise keynotes from a variety of social environments, ranging from Members of the Legislative Assembly (i.e., Northern Irish parliamentarians), an academic expert on the public sector and local government, a lead civil servant responsible for the Review of Northern Ireland's Non-Domestic Rating System, a campaigning organization working with the manufacturing and industrial sectors (Manufacturing NI), the Northern Ireland Council for Voluntary Action, and a director of the Northern Ireland Retail Consortium.

The horizontal axis in Fig. 1 is intended to convey that the IM literature is based around imagery of spatial fixity (i.e. sedentary logic) or spatial mobility (i.e. nomadic logic) or 'space on the move' (Brenner, 1998; Bauman, 2000; Cresswell, 2006; Deleuze & Guattari, 1987), both indicating different degrees of spatial movement over time. The former emphasizes the ways that social actors, capital, and resources within IM networks can be interwoven into the same material and relational spaces for at least a period of time. Spatial mobility, by contrast, involves IM social actors, capital and resources moving through space, or forming and reforming space through time via relational interactions. In this context, mobility vs. fixity has parallels with Ahmed's (2004) notions

² For further details, see: http://www.communityni.org/sites/default/files/files/151110_programme_0.pdf.

of spatial 'slippages and stickiness'. The waxing and waning nature of relational space across material and abstract domains further emphasizes this spatial mobility. An example might be an impromptu and serendipitous breakfast between a key account manager and their client when they unexpectedly meet at an airport; in that meeting the abstract relational space between these two actors is, for a short time, grounded in the material domain and a temporary spatial cluster forms. This emphasizes that IM alliances can be constantly created, recreated and maintained in fluid relational space via one-off, sporadic or ongoing actions and interactions between various social actors (Mitrega & Pfajfar, 2015). We later expand on the relationship between spatial fixity and mobility through Andrea Brighenti's explanation of territorial movement.

Fig. 1 also provides a starting point for thinking about TSCs, and the nature of their actor interactions. We suggest, for example, that TSCs are often closely connected with tall spatial ontologies. We draw inspiration from Friedland and Alford's (1991) tall ontological approach to institutional analysis, which emphasizes the importance of multiple social interactions and networks of interaction. As well as those social interactions and network formations involving an array of highly visible and formal institutional actors such as the media, trade associations, think tanks, NGOs, government agencies and governments, a tall ontological perspective would also recognize the patterns of less visible, less formal, and often less tightly bound social interactions that may generate 'small worlds' amongst actors (Watts, 1999, 2004). We contend that TSCs often lie at the intersection between these two domains of social interaction. This indicates that elements of wider societal institutional realms (e.g. religion, family, club societies, university alumni) should probably be important in IM spatial analysis (Lindgreen & Wynstra, 2005), especially where TSCs are concerned. It also echoes Sztompka's (1991) ideas regarding the dialectic interaction between macro (what is going on in society) and micro (what people are doing) societal contexts. In turn, this connects to notions of macro and micro spatiality, which we argue are brought together in the tall spatial ontology of TSCs. However, as noted above, IM research has tended to adopt mainly flat spatial ontologies, fixed and grounded in a transversal understanding of networks; it has also downplayed the role of the temporariness and fluidity of space, or spatial mobility. We have demonstrated how such characteristics are important for conceptualizing the form of TSCs in IM settings, thereby addressing our first research question.

5. Institutional boundary-work, territorology and TSCs

The second research question is to ask what function(s) TSCs are performing (and how is this being undertaken) in IM. This is where our theorization necessarily moves to consider institutional boundary-work and territorology in respect of TSCs. Boundaries and territory go hand in hand – as Brighenti notes, "boundaries are a constitutive prerequisite of territory" (2010: 60). This emphasizes an inherently spatial interdependency between these two concepts, and, we argue, a critical one to further understanding TSCs in IM.

Drawing on a discussion on the demarcation of science and non-science and its associated professionalization, Gieryn (1983: 782) defined boundary-work as scientists' "attribution of selected characteristics to the institution of science (i.e., to its practitioners, methods, stock of knowledge, values and work organization) for purposes of constructing a social boundary that distinguishes some intellectual activities as 'non-science' [i.e., outside that boundary]". Gieryn (1999) goes on to distinguish three genres of subtle, yet complex boundary-work: *expulsion*, *expansion* and the *protection of autonomy*. *Expulsion* defines the contest between rival authorities, perhaps excluding (via labeling) those rivals as outsiders, mavericks, renegades, enemies, imitators, copycats etc. *Expansion* takes place when those speaking for one authority seek to extend its frontiers and monopolize the way things are done. Finally, *boundary-work* is also mobilized through the protection of professional

autonomy against outside powers. Defining the concept in these various ways emphasizes that boundary-work necessarily involves ongoing boundary marching practices, involving a struggle for social authority, and comprising actions undertaken by actors which involve sensing, talking to, influencing, monitoring, signaling to, persuading and manipulating others, and 'getting to grips' with relevant social dynamics. Getting to grips, moreover, with the industrial market 'noise' and the "... concoction of rumours, impressions, recommendations, trade folklore and strategic misinformation." (Grabher, 2002: 209). There are clear parallels here with the notion of *institutional work* in the critical management literature (Lawrence, Hardy, & Phillips, 2002; Lawrence, Suddaby, & Leca, 2011; Zietsma & Lawrence, 2010), referring to the purposive action of individuals and organizations aimed at creating, maintaining or defending – and possibly disrupting – institutional arrangements (Lawrence & Suddaby, 2006). And, reflecting these theoretical synergies, we adopt the term 'institutional boundary-work' in this paper. Further, the notion of institutional boundary-work translates well into IM contexts, which involve the recursive interaction of multiple individual exchanges within a network of actors (e.g. buyers, sellers, regulators, governments), activities and resources within and/or across boundaries (see Ford, Gadde, Håkansson, & Snehota, 2003; Lawrence & Suddaby, 2006).

It is important to understand how institutional boundary-work might be undertaken by IM actors within TSCs and, ultimately, to what end. In answering this, we suggest the issue of space, and how it is used to leverage influence in networks and maintain market order, is critical. In particular, space takes on special significance when considering Gieryn's (1999) idea of expulsion in boundary-work. If IM actors undertake institutional boundary-work within and across the shifting geographies of TSCs, then it cannot be assumed that access to these clusters is automatic for all actors. First, the social status and position of actors, and their homophilic tendencies in terms of relational spatiality (as discussed above), create the conditions for actor alliances in IM networks. Second we contend that these actor alliances are often enacted in the form of TSCs, whose very existence is reliant on the boundary marching and interconnected gatekeeping practices of those actors allied within such clusters.

With regard to the material dimensions of relational space, we suggest that these boundary marching and gatekeeping practices can occur in a relatively visible sense. For example, access to IM actor interaction at a trade show or event usually requires a pass (mechanism) to navigate through security guards or tensile barriers (boundary). Equally, attendance and participation at a business meeting typically necessitates an invitation (mechanism) – formal or informal, written, (un)spoken or whispered – to legitimately pass through the doors of the relevant venue (boundary). With these simple gatekeeping devices or practices a boundary is marched around these TSCs as entities. Thus, using Gieryn's (1999) terminology, boundary expulsion occurs for those IM actors denied access to such events and meetings, because they are not afforded the privilege of the mechanism(s) necessary to circumvent the relevant boundaries. For these actors a given TSC is not open, but closed. Such actors thus remain on the *outside* rather than the *inside* of decision-making regimes within that TSC, and are less likely to influence (or enjoy) any benefits these may wield.

However, institutional boundary-work within TSCs also has the potential to operate in a less visible way, resonating more with the abstract dimensions of relational space, and arguably proving an effective spatial tool in the enactment of influence within an IM network and market order maintenance. To understand the processes through which boundary-work takes place in this more abstract conceptualization of space, it is helpful to bring in the notion of territory. The subject of territory is mainly considered within the broader management literature on boundary-spanning actors and activities between and within institutional forms such as organizations (Balogun, Gleadle, Hailey, & Willmott, 2005; Rosenkopf & Nerkar, 2001). However, for a fuller understanding of the importance of territory and its role in the

institutional boundary-work of TSCs in IM networks, Brighenti's (2010) discussion of territorology is more theoretically rich and relevant.

It is necessary here to understand Brighenti's (2010: 61) idea that "[t]erritory is not an absolute concept. Rather, it is always relative to a sphere of application or a structural domain of practice... Boundaries are more or less focused on a range of expressions and a given set of functions that shape the rationale for a certain territorial constitution". There are a number of things that can be highlighted from Brighenti's assertions, and from his wider discussion of territorology. First, territory is not necessarily a material thing but a product of human and institutional relations (i.e. an act or practice). Second, the formation of territory is an active and dynamic endeavor; and, third, through this active endeavor, territorial boundaries are constantly formed and re-formed. Overall, this amounts to an interpretation of territory as a socially constructed phenomenon. If Brighenti's ideas sound familiar, then they should do. There is much resonance here with Massey's notions of relational space, and the abstract dimensions of the TSC in IM networks.

A particular benefit of Brighenti's (2010) work in this instance, however, is that it helps reveal how IM network actors might undertake institutional boundary-work in the abstract dimension of TSCs through their inter-relational dynamics. In particular, and explicitly recognizing both temporal and processual aspects of territory, he identifies the importance of territorial movement. Drawing on the work of Deleuze and Guattari (1980), Brighenti identifies three 'movements' in the territorial process; namely, *deterritorialization*, *reterritorialization* and *territorialization*. Brighenti adopts this order of exposition to highlight the fact that these movements coexist and affect each other, and also that territories are actualized when one leaves them. Hence, he begins the description of these movements with deterritorialization (because, it is posited that leaving a territory is an act which renders the territory visible as a boundary is crossed). Equally, on leaving a territory (i.e. deterritorializing from some relations), a new territory is created.

This sheds light on how the boundaries amongst and between actors in IM networks may be constantly drawn and redrawn through the medium of the TSC. As noted above, TSCs demonstrate fluidity in relational space, constantly emerging and dissipating, forming and reforming – like bubbles on a simmering pot. Thus, IM network actors may continually shift their positions in this fluid relational space as they transit through the abstract dimensions of various TSC formations, bound and/or drawn together (or not, as the case may be) by their social status and position and relative homophily. As actors' positions move in relational space, they simultaneously enact the deterritorializing and reterritorializing marching actions that form the ephemeral territories of TSCs and the boundaries that surround them – boundaries that may exclude or expel those outside the homophily, or without the social status and position to be part of the territory of a TSC and/or influence the nature of its character. However, we suggest that the abstract dimension of these territorial movements can render them difficult to apprehend, and therefore to challenge, for actors thus excluded. Such abstraction also presents major challenges for the IM researcher, as discussed below.

6. Discussion and conclusion

Following calls for management researchers to engage with economic geographers in the study of firms (see Palmer et al., 2006), this interface has been significantly extended in recent years in the context of IM research (e.g. Nicholson et al., 2014; Nicholson et al., 2013; Palmer & O'Kane, 2007; Palmer et al., 2015). Nevertheless, the study of space as a central theme in the IM field is still in its infancy. Our paper, therefore, represents an effort to help develop theory and understanding further in this area. Central to our discussion is how to conceptualize TSCs and to better understand the function(s) TSCs are performing in IM settings. Arguably, extant research into IM networks does not fully capture their dynamic nature, and the fluidity of their actor exchanges across waxing and waning TSCs, which may be important sites for the brokering of

network influence and market order, particularly as they are difficult for opposing or excluded actors to see and challenge, and, indeed, for researchers to analyse and critique. The complex, interwoven, layered and palimpsestic nature of both material and abstract dimensions in relational space adds further complexity, which IM researchers might engage with more fully to further understand the way network interactions take place and exert influence. The schema presented in Fig. 1 provides a potential starting point for further research in this area. This heuristic device enables us to begin to consider what questions and what methods might be appropriate when researching the interlinked concepts of space and time in IM networks in the future. At the same time, the theoretical insights from Massey, Gieryn, and Brighenti attest to the abstract nature of relational space in TSCs, indicating how the linked concepts of institutional boundary-work and the territorial formations of relational interaction present particular research challenges.

We suggest that much of what has been reported to date within the IM literature relates to more visible actions and practices (e.g. network pictures, nodal paths and broader network mapping, formal contracts, compliance standards, quality control, or scripts such as a written plan). However, as Thompson (2005: 31) notes, "the making visible of actions and events is... an explicit strategy of individuals who know very well that mediated visibility can be a weapon in the struggles they wage in their day-to-day lives." Conversely, future research might rethink TSCs not only as a conspicuous drama in this tradition of mediated and performative visibility, but also as spaces of configured social relations which are frequently discrete, unseen, mundane and ignored by the researcher due to their often ephemeral, abstracted and difficult-to-pin-down nature. As Ettlinger (2004) implies, researching such unconsidered spatial paths can provide insights into understanding market productivity, competitiveness and effectiveness.

An added problem here may relate to the fact that the aspects that constitute the essence of TSCs, particularly in terms of materiality and abstraction, social status and position, homophily of the actors involved, and motion and fluidity, may be subject to a seemingly 'unconscious' taken-for-grantedness by the actors embedded within those clusters. This raises a fundamental research dilemma: How can researchers then study such institutional arrangements when their studied actors may be relatively oblivious to the associated institutional practice(s) in which they are involved, and as a consequence might be unable to articulate or rationalize these effectively? One potential solution may lie in searching for and exploring territorial exits (Brighenti, 2010) and temporary breakdowns, such as social actors' responses to thwarted expectations, the emergence of deviations and boundary crossings, and awareness of differences (Sandberg & Tsoukas, 2011).

This could involve employing longitudinal, real-time ethnographies of IM network interactions – a research technique identified as important by Hoholm and Araujo (2011), but which nevertheless remains relatively underused in IM research (Visconti, 2010), perhaps because of the time commitment it requires, along with the competing demands familiar to any academic researcher. Of relevance here is the notion of 'immersion' (Visconti, 2010), which has been identified as critical in understanding the actor relationships of IM networks (Hoholm & Araujo, 2011). Long-term ethnographies also provide the potential for a gradual acculturation over time between the researcher and other actors under study. In this manner, the researcher may be able to more easily access the territory of the TSC and thereby discover the nature and extent of its influencing factors, and the nuances of actor relations (for example, the meaning of the small social anomaly, or extra gesture such as a nod and a wink). This approach is also about "surfacing the invisible work" (Leigh-Star, 1999: 385) to reveal the "frustrations, subversions and networks" (Billo and Mountz, 2015: 7) between various actors, resources and activities through the use of institutional ethnography, whilst also "searching for and tracing fragments of processes that could not have easily been recorded via other methods" (Hoholm and Araujo, 2011: 938). Without immersion and acculturation, or 'a close dialogue'

(Clark, 1998), the researcher may remain on the periphery, or outside, of TSCs – not part of the homophily, devoid of the necessary social status to see those clusters from the inside, and potentially subject to exclusionary aspects of their boundary-work rather than in the position to view and foreground how that boundary-work is spatially enacted and operationalized.

Another way that the taken-for-granted institutional arrangements of temporary spatial clusters may become more visible to the researcher is through the language used to express or rationalize the behavior connected with them in IM management discourse. Gronn's (1983) ideas might inform such a discourse-focused research approach. Specifically, his distinctions in relation to talk *to*, talk *at*, talk *with*, talk *over*, talk *instead of*, talk *again* and talk *for* may help understand the discursive nature of social identity-defining practices in institutional boundary-work, reflecting Gieryn's (1983, 1999) ideas about *who is* and *who is not* involved. Put otherwise, we argue that there is much to gain from studying such discourse, especially from tall and flat spatial ontological perspectives (Sztompka, 1991; Schatzki, 2010), to understand the relational, institutional and temporal dynamics of TSCs in IM, and indeed IM relationships, interactions and institutional structures more widely.

In summary, we argue that focusing research attention on TSCs, their actor interactions, and the manifest consequences of their institutional boundary-work, reflects the fact that IM actors can enter temporary alliances as well as being part of more stable networks of relations. This requires research techniques suitable for studying the 'fleeting' as well as the 'fits-and-starts' nature of temporary spatial clustering, which are capable of capturing the unorchestrated responses, non-routines and institutional boundary-work resolutions of involved actors and their resultant untidy geographies (Ettlinger, 2004). We suggest longitudinal ethnographic and discourse-related approaches may be the best spatially- as well as institutionally-attuned way to achieve this.

To close, our paper has sought to intensify the theorization of TSCs in IM settings and to demonstrate that such institutional arrangements lie at the heart of a relationship and network perspective for those markets. We have argued that TSCs, especially in their more abstracted form of relational space and related institutional boundary-work, are spaces where IM actor relationships are being created, maintained and reinforced. In this sense, suggested analysis of TSCs, through methodologies of ethnography and discourse analysis, holds potential for unraveling the many and complex interactions between spatiality, social relationships and institutional boundary-work for IM spaces, and in so doing advancing a constructive and synergistic dialogue between industrial marketing and other social science disciplines, particularly economic geography.

7. Managerial implications

From this paper we identify three potential implications for IM managers. First, we suggest that managers need to understand that IM should not be wholly tied to familiar material spatial understandings and tensions – e.g. technology hubs and incubation, business locations, catchment areas, local vs. global, and urban vs. rural. Managers also need to be aware that relational space can emerge from the interactions of network actors in TSCs, both in a material sense (e.g. scheduled meetings and events, supplier workshops, trade shows) and a more abstract sense (e.g. spaces of discussion and opinion, spaces of agreement and alliance, spaces of disagreement and dispute).

Second, we suggest that managers need to understand that the space of TSCs is rendered an extremely fluid and slippery concept. For example, the spatial materiality of a series of scheduled meetings between network actors may be interspersed by ongoing conversations, rapidly shifting viewpoints and changing alliances and allegiances between the same actors in the abstract relational space they create between those meetings. A managerial awareness that such spatial fluidity exists for TSCs, and an attempt to understand and monitor it, may be a means of keeping up with market trends, employee viewpoints and

organizational morale. For the same reasons, a manager ignoring such fluidity in the relational space of TSCs is probably unwise; whilst attempting to control it might be deemed micro managing, which rarely goes down well with employees.

Third and finally, managers need to understand that TSCs, through the processes of institutional boundary-work, are a potential site of network influence and market order that is not always easy to apprehend or manage. They might therefore wish to think about strategies for ensuring they have the necessary mechanisms to circumvent such boundary-work and associated boundaries. This should allow managers to minimize their potential exclusion from those TSCs that might play a key role in shaping future thinking and opportunities for the IM networks within which they are embedded.

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