



SPACES online

Spatial Aspects Concerning Economic Structures

Harald Bathelt

Theorizing Temporary Proximity, Temporary
Clusters and Temporary Markets



UNIVERSITY OF
TORONTO



RUPRECHT-KARLS-
UNIVERSITÄT
HEIDELBERG
EXZELLENZUNIVERSITÄT

Issue 2019-01 | Volume 15
www.spaces-online.com



Please quote as	Bathelt, Harald (2019): Theorizing Temporary Proximity, Temporary Clusters and Temporary Markets. SPACES online, Vol.15, Issue 2019-01. Toronto and Heidelberg: www.spaces-online.com.
Authors	Harald Bathelt, University of Toronto, Departments of Political Science and Geography & Planning, Sidney Smith Hall, 100 St. George Street, Toronto, ON M5S 3G3, Canada; Zijiang Visiting Professor, Institute of Urban Development, East China Normal University, Shanghai, P.R. China; E-mail: harald.bathelt@utoronto.ca, URL: http://www.harald-bathelt.com
Keywords	Global buzz, temporary cluster, temporary market, temporary proximity, trade fairs
JEL codes	D83 (Search; Learning; Information and Knowledge; Communication; Belief; Unawareness), D85 (Network Formation and Analysis: Theory), M39 (Marketing and Advertising: Other), O33 (Technological Change: Choices and Consequences; Diffusion Processes), R12 (Size and Spatial Distributions of Regional Economic Activity)

Abstract

This chapter theorizes how temporary proximity operates in the context of trade fairs and other professional gatherings. Such events function as temporary clusters and temporary markets that bring together representatives from an organizational field for the purpose of making business and exchanging knowledge. The unique characteristics of these events generate global buzz which in turn facilitates knowledge spillovers that are important for adjustments in products and technologies. Intrinsic to these events and the buzz they generate are innovation dynamics, wherein participants' desires to become more effective in finding business partners during future events lead to technological and product adjustments. The firms that partner at these events have an incentive to develop embedded relations that can grow into longer-term producer-user linkages. The search processes for new products and technologies at trade fairs often prioritize choices that fit the specific production context of the searching firms, thus creating a trend toward technological specialization within larger production systems, instead of driving technological convergence.

Editors: Harald Bathelt, Johannes Glückler

Managing Editor: Sebastian Henn

ISSN: 1612-8974

© 2019 SPACES online. The authors maintain full copyright of the papers.

Theorizing Temporary Proximity, Temporary Clusters and Temporary Markets

1 Temporary Proximity

Economic geography, regional economics and related disciplines are based on the fundamental understanding that economic processes differ between localities and that firms can benefit from being located in close proximity to one another. Not only does proximity in economic relations reduce transportation and transaction costs (Scott 1988; Weber 1909), it serves as a fundamental catalyst in sharing knowledge, solving problems and generating trust in economic life (Storper and Walker 1989). Traditionally, the advantages of proximity have been associated with economic agents that are co-located within a regional context or locality, sharing the same institutional context (Gückler and Bathelt 2017) and benefiting from ongoing co-presence and face-to-face interaction. While it is clear that economic interaction and its results cannot be explained by spatial proximity alone and that social and relational affinities greatly support such interaction (Amin and Cohendet 2004), a sizable literature in the field views cities and regions as the fundamental units of knowledge production and innovation (Storper and Venables 2004), sometimes citing early studies from the pre-Internet and pre-globalization era (Audretsch and Feldman 1996).

With the rise of the global knowledge economy, however, it becomes clear that proximity can no longer be viewed as a dominant organization principle of economic life. Firms have to make choices of whether to locate in a single place, for example close to their resource base, or whether they locate individual functions in different places, trading off for multiple spatial proximities and distances. In such a situation, a firm may decide to establish a new research and development facility in a different country to access that country's specific knowledge base and be close to the respective market, while accepting that such facilities will be located far away from established production sites (Bathelt and Turi 2011; Malecki 2010). In other words, complex economic processes are always associated with both spatial proximities and distances.

Torre and Rallet (2005) distinguish two fundamental forms of proximity that operate behind such production configurations: spatial (geographical) and organized proximity. In this distinction, organized proximity is not a spatial construct but relates to a social affinity that does not exist a priori but has to be created, organized and implemented to enable and secure production linkages over distance (Rallet and Torre 2009; 2017). Without the natural advantages of permanent spatial proximity, temporary proximity has been recognized as an important catalyst to generate economic relations over distance and support their coordination (Bathelt and Henn 2014) especially when non-routine processes dominate, when problems occur or when specific changes need to be planned. In recognizing the importance of related temporary get-togethers, a booming literature on different configurations of knowledge creation that require temporary co-presence has developed, including studies about the role of business travelers (Beaverstock et al. 2009; Wickham 2008), transnational family networks (Henn 2012), the New Argonauts (Saxenian 2006) or co-working spaces and temporary workplaces (Bilgrim et al. 2009; Merkel 2017).

One specific form of temporary gathering that has been central to related debates is the so-called temporary cluster that has been identified and studied in the context of large international trade fairs, conferences and similar types of community meetings (Maskell et al. 2006). Such events have long been a focus of studies in industrial marketing and management viewing these events as opportunities for producers to attract buyers, introduce and advertise products to the market, develop brands and negotiate and conclude trade deals (Golfetto

1991; Kirchgeorg 2003). While sales negotiations and deal-making are still important characteristics of many of the leading business-to-business fairs today, which will be the primary focus in this chapter, economic transactions during such events appear to stagnate as the importance of atypical visitors increases who do not participate to buy the displayed products (Borghini et al. 2006; Sharland and Balogh 1996). While exhibitors have their markets in mind when they attend these events and visitors focus on their supply chains (Power and Jansson 2008), studies in the past decade have repeatedly highlighted the crucial impact of knowledge flows during these events (Borghini et al. 2014; Luo and Zhong 2016; Maskell et al. 2006; Rinallo and Golfetto 2011) and developed a knowledge-based understanding of their dynamics (Bathelt et al. 2014).

In recognizing the significance of such gatherings as places where knowledge circulation and creation take place in temporary proximity – related to new products and processes, changing market needs and opportunities to acquire partners – a fine-grained understanding of temporary clusters has developed over time. I have participated in these explorations since the early-2000s and aim in this chapter to integrate the crucial insights that have resulted from this research into a consistent theorization of temporary proximity, temporary clusters and temporary markets.

In the next section, I will emphasize that trade fairs are not just sales and marketing events but that they are crucial places of knowledge generation. They develop vibrant knowledge ecologies that form temporary clusters and temporary markets. The section that follows analyzes and characterizes the specific nature of the knowledge ecologies at these events that generate so-called global buzz associated with manifold important learning channels. It is then argued that knowledge exchanges and innovation are not only characteristics of leading flagship fairs that are focused on technology development but that they are also fundamental processes at trade-based events that establish temporary marketplaces for corporate sellers and buyers. Based on feedback processes that unfold over time, these events are characterized by important knowledge dynamics and become drivers of innovation processes in their respective organizational fields. In the subsequent section, it is shown that even regular market relations at trade fairs provide incentives to develop ongoing partnerships and that related knowledge flows lead to a transition from a market toward a production focus. In concluding, the seeming paradox is explored of how trade fairs, despite the fact that the development of new technologies is intrinsic to the interactions they create, facilitate increased specialization in permanent systems within which the respective firms are situated and thus reinforce extant economic pathways.

2 Temporary Clusters and Temporary Markets

While trade fairs have traditionally been viewed as temporary marketplaces where sellers meet buyers to introduce products into the market and engage in market transactions (Golfetto 1991; Kirchgeorg 2003; Meffert 1999), a different perspective on trade fairs has developed since the mid-2000s that pays particular attention to the potential of these events to stimulate knowledge flows over distance (Bathelt and Henn 2014; Li and Bathelt 2017). The concept of the temporary cluster directs attention to the role of trade fairs and similar community gatherings in generating and maintaining networks in production, research and marketing (Li 2006; Maskell et al. 2006; Panitz and Glückler 2017). A parallel discussion about temporary markets extends this view and identifies the different knowledge ecologies and related strategies that exist in different types of events (Borghini et al. 2014; Rinallo and Golfetto 2006; 2011). From these explorations, a comprehensive knowledge-based conception of trade fairs has developed over time (Bathelt et al. 2014; Rinallo et al. 2017) which emphasizes the importance of international fairs as critical nodes in the global political economy (Zeng and Bathelt 2015). While associated work initially focused on the leading technology-based trade fairs (Bathelt and Schuldt 2008; Maskell et al. 2006), increasingly attention has been paid to different types of events, their

specific knowledge ecologies (Bathelt et al. 2014; Li 2014; 2015) and the global trade fair circuits they are part of (Power and Jansson 2008).

From a knowledge perspective, trade fairs appear similar to permanent industrial clusters with identifiable horizontal, vertical and institutional dimensions and can thus be viewed as temporary clusters (Maskell et al. 2006) that produce complex knowledge ecologies (Bathelt and Schuldt 2010). The leading flagship events of an organizational field (DiMaggio and Powell 1983) bring together a representation of global demand and supply and form a microcosm of this field (Rosson and Seringhaus 1995) based on temporary proximity. Firms producing complementary products establish the vertical dimension of the trade fair linked through value-chain-based linkages. Along this dimension, knowledge exchanges occur between existing and potential future transaction partners and stimulate processes of learning by interaction. In contrast, competing firms with a similar production program generate the horizontal dimension characterized by different types of knowledge flows (Luo and Zhong 2016; Power and Jansson 2008). Through processes of scanning the exhibits of competitors and learning by observation about new developments and the perceptions of other attendees, firms are able to achieve an overview of their competition and establish effective benchmarks for their production program and its future direction (Bathelt and Schuldt 2010).

Intensive face-to-face interaction and observation are especially effective because the participants at a trade fair share a common institutional dimension that revolves around their organizational field. Shared institutions support sense-making and enable fine-grained knowledge exchanges. The attendees that engage with each other originate from overlapping knowing communities (Boland and Tenkasi 1995) that are focused on the same key markets and a similar technological focus. This institutional dimension generates a natural environment to discuss impressions of and developments in the field and to collectively interpret new trends (Bathelt and Schuldt 2010). Through their roles as temporary global nodes of organizational fields, these events are able to internalize the external dimension of permanent clusters by gathering international suppliers and users temporarily at a single site.

While this concept of temporary clusters enables researchers to develop new perspectives regarding the connection between local and global production (Ramírez-Pasillas 2008), it is also characterized by a specific focus on knowledge exchanges in upstream production and innovation processes (Rinallo et al. 2017). It is only through the combination of this view with a temporary market perspective (Rinallo and Golfetto 2011) into a comprehensive knowledge-based conception of trade fairs (Bathelt et al. 2014) that related research has opened up to also investigate downstream market linkages, the changing character of trade fairs in competing with each other (Li and Bathelt 2017), and the knowledge-based strategies of trade show organizers in strengthening the competitiveness both of the events and their underlying industries. In particular, this comprehensive perspective identifies different types of business-to-business fairs that are characterized by a different structure of knowledge flows and corresponding learning opportunities: global hub, export, import and local exchange fairs.

As opposed to the leading flagship events or global hub fairs, export fairs are especially designed to strengthen a regional or national industry by providing a platform to connect the respective producers with their international markets. These events can be seen as instruments to support industry specialization and provide opportunities for foreign users to learn about a territorially-based industry. Vice versa, export fairs generate opportunities for regional industries to build global pipelines and learn about specific needs and preferences in their international markets. Exhibitors are also able to inspect each other's products and gain insights in how to differentiate their own products (Golfetto 2004; Rinallo and Golfetto 2011). Conversely, import fairs connect regional or national user industries with international suppliers and provide them with access to products that

are not manufactured regionally or nationally. This is especially beneficial in developing economies when national and regional industries do not yet exist or do not produce the required quality of products.

However, technological learning opportunities for regional producers may be limited at such international events if the region or country that organizes them is situated at a very early stage in its economic development (Li 2014; 2015). While local exchange fairs may not generate many learning opportunities for technological innovation due to the low technological level of the participants, global hub events have little regional or national involvement at all and are primarily set up as places that stimulate learning and exchange processes for international participants. Global export and import fairs similarly may not offer extensive technological learning potential because the technology gap between domestic and international participants may be too large at this early stage and prevent local firms from learning about opportunities for innovation. An optimal learning space for regional or national trade fair participants may therefore be found at events that are characterized by a more balanced participation of domestic and international exhibitors and visitors with a mix of highly sophisticated and more mature products and technologies, as opposed to pure import, export or global hub events (Li 2014). While limitations for learning may thus be in place at the latter types of trade fairs in the initial stages of economic development, this changes over time as the producers and users become used to operating with more advanced technologies and benefit more from the knowledge flows associated with such events. As will be shown further down, even pure sales events develop under such conditions into places of specific learning and innovation dynamics.

3 Global Buzz and Learning Channels

The manifold learning opportunities that exist especially at large trade fairs are a consequence of the specific nature of these events, the character of their participants and the opportunities that are available to engage with others in temporary proximity. These events create specific knowledge ecologies consisting of conversations, observations, rumors and gossip – referred to as global buzz. This buzz makes such trade fairs particularly attractive for firms as they benefit from unique learning channels (Bathelt and Schuldt 2010; Maskell et al. 2006). While global buzz shares some similarities with the local buzz in permanent clusters (Bathelt et al. 2004; Pinch et al. 2003; Storper and Venables 2004), its specific value results from the fact that it is based on a broad, sometimes global, representation of the organizational field (Rosson and Seringhaus 1995). The knowledge exchanges at trade fairs are especially effective since these are not singular events but integral parts of what could be called the modern periodic social economy (Norcliffe and Rendace 2003) and, as such, induce constant updates of information from prior events. Trade fairs and similar professional gatherings take place annually or every few years and provide a forum for established and new firms in an organizational field to discuss and observe the state of their field, as well as to take note of the changes and adjustments that occur over time. This relates in the first place to the exhibited products and processes but extends to the development of the entire industry, its markets, technological bases and institutional settings.

Organizational fields are also the basis of other types of trade fairs that have different characteristics and serve different purposes, each bringing together similar groups of participants on an almost ongoing basis at different times of the year in different places worldwide. As firms find out which of the many events in a field are relevant to them and select the ones in which to participate, this generates a cycle of related community gatherings (Power and Jansson 2008) and creates a buzz in the field that moves from event to event and jumps from place to place with the event cycle. While crucial components of buzz can be accessed at different types of trade fairs, it is particularly the important technology-based fairs that generate this global buzz almost automatically as a consequence of their unique characteristics (Storper and Venables 2004). These are associated with (i) global co-presence, (ii) intensive face-to-face interaction, (iii) dense observations, (iv) intersecting communities and

(v) multiplex meetings and relationships (Bathelt and Schuldt 2010). This global buzz develops from temporary proximity and cannot be replicated in a similar dynamic way within permanent industry settings (Bathelt 2011).

(i) Global co-presence

One specific characteristic of leading trade fairs is that they bring together international or global representatives of an organizational field that are committed to engage in discussions and interactions with each other. These include suppliers, producers, users, buyers, industry observers, media representatives and other actors. Their dedicated co-presence is a crucial precondition for the development of global buzz (Bathelt and Schuldt 2010). The ensemble of actors that come from different places with different market and production contexts is unique and does not exist in a similar way in any other context. Since the attendees invest substantial time and money to participate in trade fairs and have a similar focus directed toward the displays of established products and processes as well as prototypes and innovations, their interactions are fully focused on the organizational field and its development (Bathelt and Schuldt 2008; Luo and Zhong 2016). Unlike in day-to-day operations, participants are much less interrupted by deadlines and requests nor are they distracted by unrelated work routines. Since the exhibits around which the participants gather represent products and technologies from different contexts in different parts of the world, attendees are simultaneously faced with familiar, less familiar and even completely new developments. The large diversity of agents and exhibits that focus on different stages of the value chain offer the opportunity to confirm charted terrain but also to explore uncharted terrain in the field, thus creating a unique milieu for the exchange of knowledge and experiences (Entwistle and Rocamora 2006). Such a setting creates an ideal playground for intensive face-to-face exchanges and interactions.

(ii) Intensive face-to-face interaction

Short-term intensive face-to-face interaction between the different groups of participants are of crucial importance as firms are looking for products, technologies or partners that are relevant to them and fit their needs. Their challenge is to find and identify these among the often hundreds, thousands or tens of thousands of other participants (Callon 2017). Associated processes of getting an overview, sorting among many alternatives and selecting the best options available can be most effectively conducted during face-to-face encounters. Face-to-face interaction generates crucial advantages compared to other forms of interaction (Storper and Venables 2004) as complex knowledge bodies can be explained more clearly, complicated issues repeated in response to questions and feedback mechanisms used to reensure that messages have been properly communicated. This is strongly supported by the parallel transmission of nonverbal cues that provide additional information or have an integrational function (Short et al. 1976). For instance, exhibitors explaining new technologies will provide as much information and data as possible about new technologies and their relevance (Cohendet et al. 2013) 'to spread the word', generate initial trust, create interest and stimulate future business. By using hand gestures for example, they can better explain the structure of a new technology or split up a complex knowledge body into individual parts and explain how they are linked. Visitors can study the body language during communication to identify positive or negative associations with a new technology and listen to the comments of other visitors. All of this provides opportunities for interactive learning and generates a platform to effectively evaluate new product and technology developments (Prüser 1997). Because of the highly-condensed character of events that bring many attendees to a limited space, face-to-face contacts with other attendees are easy to achieve and almost unavoidable. Through engagement in face-to-face interaction, participants are able to quickly check out technological developments and acquire crucial knowledge that helps

them distinguish between more and less important trends and make initial decisions regarding the future use of products and technologies (Bathelt and Schuldt 2008; Li and Bathelt 2017; Zhong and Luo 2018).

(iii) Dense observation

Face-to-face interactions with other attendees at trade fairs are complemented by dense observations of the artifacts that are at the center of the events and that provide the context for interactions. The exhibits and their set-up are crucial markers for visitors to organize their participation and to decide which firms to approach and who to engage in face-to-face interaction. The observation of exhibits is also important for exhibitors who engage in systematic monitoring to get an overview of their competition (Bathelt et al. 2014; Bathelt and Gibson 2015). By scanning the products and technologies that are exhibited, firms are able to identify relevant innovations and new trends in the industry and compare their own products with those exhibits. Additionally, participants are able to touch, smell or otherwise experience certain design characteristics of the exhibits, which cannot be achieved in other ways. This helps them evaluate these artifacts. When faced with new technologies, they can gather ideas about how these are structured and draw conclusions about their architecture. Importantly, when walking through the exhibits, participants can watch peers and their reactions, which helps identify especially interesting and promising developments in the field. They can combine expected and surprising observations regarding products, technologies and their designs with materials such as samples and brochures that are also available at the events. Together, the observations and additional materials enable processes of learning by observation and inspection and have an important benchmark function. Participants can reflect upon their own production program and their strategies, identify new market segments and approach related customer groups, depending upon which refinements and changes they plan after the events (Bathelt and Schuldt 2008; Blythe 2002; Borghini et al. 2006; Meffert 1993).

(iv) Intersecting communities

The manifold personal encounters that occur during trade fairs through face-to-face interaction and ongoing observation processes are quite effective because they lead to crucial knowledge flows as the participants understand each other's language and interpretations and can make sense of the various feedbacks they receive (Bathelt et al. 2014). The reason for this is that the participants are members of related knowing communities (Boland and Tenkasi 1995) that are embedded in the same organizational field. While the attendees have different foci in their professional life ranging from marketing through engineering, their knowing communities include overlapping communities of practice (Wenger 1998) and epistemic communities (Knorr-Cetina 1999). Through this, knowledge transfers between the participants are efficient and occur almost automatically. The trade fair attendees have a common institutional basis that generates similar or joint understandings, repertoires, and visions about the organizational field and its dynamics (Blythe 2002; Entwistle and Rocamora 2006). As the participants share experiences with similar technological and market settings, they are able to make sense of new developments and jointly evaluate technological trends and their importance. When new machinery is introduced, for instance, they can make sense of their architecture, try to identify the technological basis behind these novelties and decide whether it would make sense to move in a similar direction with their own products or buy these items from others. Because of the dense knowledge flows through ongoing face-to-face encounters, they do not even have to inspect a specific exhibit in person but will hear about crucial novelties from others. Since they are engaged in multiplex meetings and relations, it is unlikely, that

participating firms will miss out on new product and technological developments as they are exposed to such knowledge in many different ways (Bathelt and Schuldt 2008; 2010).

(v) Multiplex meetings and relationships

The participants at trade fairs relate to each other in multiplex meetings and relationships. While many faces encountered at a trade fair are new, attendees also meet existing personal contacts, industry friends, long-standing partners or other acquaintances from former such events. All of this leads to a mixture of professional and personal networks that involve elements of trust and contribute to reliable and fine-grained knowledge flows (Bathelt and Schuldt 2010; Uzzi 1997; Zhong and Luo 2018). The participants get together or meet during trade fairs in multiple ways. They may plan meetings in advance by e-mail, send spontaneous text messages to others to go for a coffee or get together for lunch to discuss business issues. All of this occurs at different places in different forms, ranging from visits at the exhibits to chance encounters in the hallways or dinner meetings outside the trade fair venue. Visitors, for instance, have the option to communicate with exhibitors at a single occasion or go back and forth between several exhibits to collect information and make decisions. They may be interested in repeated interaction to get to know each other better and collect initial information regarding the compatibility of potential partners. The various encounters involve different contexts for interaction with a different mix of messages, small talk, gossip, exchange of news and discussing technological novelties. Often attendees enjoy getting out of their normal work routine for a few days and are therefore quite relaxed and open for knowledge exchanges. These exchanges are not always exclusively related to the business context but provide opportunities to get to know potential partners in an informal way. Even competitors, which originate from the same regional or national context and would normally not talk to each other, may exchange observations during an event that takes place on neutral territory (Bathelt et al. 2014; Bathelt and Schuldt 2008; Blythe 2002). All of this creates substantial global buzz and produces enormous momentum.

4 Dynamics of Temporary Clusters and Temporary Markets

When the concept of global buzz was originally introduced, the assumption was that such unique knowledge ecologies primarily exist in the context of few leading technology- and innovation-based trade fairs. However, recent research has argued that innovation is not just a feature of few selected trade fairs but has much broader relevance at such events, even if their focus is on market transactions and sales. In fact, what we observe is that the development of product and technology innovations is an intrinsic process to these events (Bathelt et al. 2017; Callon 2017).

The classical understanding of the trade fair is that of a temporary market where a large number of exhibitors offer products for sale to an even larger number of buyers. When sellers and buyers come together in close proximity, automatically, one might assume, an environment is created that stimulates buying and selling activities between the actors. One would expect that the larger the event the more easily transactions take place. The Canton Fair in southern China is an example of such an event. Roughly 200,000 foreign buyers get together with about 25,000 Chinese exhibitors twice a year for the purpose of engaging in trade relations (Jin and Weber 2008; Li and Bathelt 2017). In such market situations, one would not necessarily expect that innovation plays an important role. However, empirical work indeed shows that new product and technology development is directly related to the participants' goal to establish market relations (Bathelt et al. 2017). It is part of the complicated process of finding the best-fitting trading partners at such an event. At the outset, such trade fairs create a multilateral market context with a very large number of potential sellers and buyers (Aspers and Darr 2011). While this generates a range of opportunities for participants, it also engenders the challenging task of narrowing down this multifaceted market context to a bilateral situation where one exhibitor faces one

buyer to discuss specific conditions of trade (Callon 2017). Only once this has been achieved, serious negotiations about product alterations, prices and delivery conditions may take place that lead to a sales contract.

To get to this point involves a critical selection process that consists of myriads of short-term encounters between potential sellers and buyers during which intensive knowledge exchanges take place. Buyers visit one exhibit after the other and explain which products with which characteristics they need, what budgets they have and for what applications they are searching for a product or technology (Bathelt et al. 2017; Callon 2017; Zerbini and Borghini 2012). At the same time, sellers reveal the features of their products, how they were produced, with which purpose and with which materials. In this sense, the potential trade partners use such brief encounters to connect past entanglements of how the products were produced with future entanglements of how they will be used (Callon 1998). If a perfect or close enough match between these two is found, exhibitors and sellers have successfully narrowed down the multilateral market context and subsequently engage in serious one-on-one negotiations.

This process is of course not always successful and, while many short encounters between potential buyers and sellers take place at large market events, only a small portion of these exchanges will actually lead to bilateral sales negotiations and the formation of contracts. In order to get to this point, large amounts of knowledge about the products and their potential uses are being exchanged. It is this process that creates the vibrant knowledge ecologies at these events. In other words, as a by-product of the attempt to narrow down the multilateral to a bilateral market context, global buzz unfolds and generates important knowledge spillovers (Aspers and Darr 2011; Bathelt et al. 2017; Bathelt and Schuldt 2010; Callon 2017). Even those exhibitors that are less successful in finding buyers collect much valuable feedback about their products and about user needs, both of which help them understand why they were not able to attract buyers. Conversely, those visitors that do not find the products and producers they were looking for know what products there are instead and why they did not find a perfect match. This global buzz thus generates crucial learning opportunities for future economic action.

Exhibitors use the global buzz from former events to identify possibilities to change their product offerings, add new elements to technologies or use new materials in their products. Trade fairs thus drive innovation and product differentiation processes of firms (Bathelt 2017; Zhu et al. 2020). They constantly adjust their exhibits from trade fair to trade fair and present the most recent designs from past feedbacks with the goal to attract more buyers and make it easier to engage in bilateral negotiations. Along the same lines, buyers use their knowledge about trends in products and technologies from the last events to modify their production process or develop new applications that fit better with the available range of supplies. They constantly modify their demands and adjust to available offerings. At large events, such as the Canton Fair (Bathelt et al. 2017), this creates fundamental innovation and product differentiation dynamics. While established as an export fair to generate trade between Chinese exhibitors and foreign buyers, the nature of products and technologies exhibited at the Canton Fair constantly changes and visitors alter their demands from event to event. In this process, innovation – which is not at the forefront of this event – becomes an important characteristic as firms present themselves in unique ways and buyers come with specific requirements and needs (Callon 2017). This generates a dynamic learning platform (Li and Bathelt 2017; Zhong and Luo 2018) rather than a static marketplace for transactions.

5 Linking Markets and Production through Temporary Proximity

In the dynamic product and technology context of large trade fairs, a downstream market perspective is often dominant for exhibitors that are focused on promoting or selling their products. Conversely, visitors are looking upwards for suppliers whose products they can apply or process further. This perspective is not surprising because vertical linkages are historically the *raison d'être* of and still central in trade fairs (Allix 1922; Braudel 1979). Despite this, we should not assume that the market relations that unfold during a trade fair have the character of one-off trade deals without social relations between the partners involved (Berndt and Boeckler 2009; Callon 2017). This is clearly not the case for those participants that are looking for longer-term partners in production, marketing or research and engage in intense interaction processes at trade fairs (Li and Bathelt 2017; Zhong and Luo 2018). More generally, even market relations that develop at trade fairs have a tendency to turn into more complex social relations over time that become increasingly embedded (Aspers and Darr 2011; Granovetter 1985). As such, trade fairs are clearly different from neoclassical markets. Rather, what starts with the intent to develop a market relation often turns into a more complex production arrangement, suggesting that market relations develop into production linkages over time and merge into complex interfirm interactions that have both a market and production focus (Bathelt et al. 2017).

One could expect that at events like the Canton Fair, which are designed to attract foreign buyers to buy products from domestic exhibitors, no social relations develop between the participants as they are interested in transactions and trade. This is, however, not the case. A recent study showed that three quarters of the market relations investigated in diverse consumer goods industries at the Canton Fair went along with the development of social relations (Bathelt et al. 2017). In general, of course, the type of market relations that emerge also depend on the type of product, technology and the condition of use. A standardized product or resource may not require much interaction between sellers and buyers and can be sold on the spot. This changes, however, when niche or customized products are involved that are targeted at specific customer groups or specialized applications. In such cases, products cannot be bought from the shelf but need adjustments to fit the required purpose. It is crucial that detailed discussions take place between the trade partners to make sure that past and future entanglements of the respective products are compatible or to check whether modifications are possible (Aspers and Darr 2011; Callon 1998).

Often, the global buzz that develops during the trade fair is not sufficient to guarantee a perfect match and to precisely identify the required adjustments. Therefore, sellers and buyers continue communicating after the event and meet in person at the production sites to define the customization procedures and specify contracts (Bathelt et al. 2014). These market relations involve substantial knowledge exchanges and become more embedded the more interactions are necessary and the longer this process takes. Since the identification of potential partners and the adjustment processes are time-intensive and costly, both sellers and buyers are committed to a successful relationship and try to limit changes in partners and repeating this process over and over with others. Ultimately, this creates a strong incentive for successful interactions to continue through which they are gradually transformed into longer-term linkages. At the Canton Fair, about two-thirds of the exhibitors investigated engaged in follow-up negotiations with customers they met through the event and nearly half were involved in market configurations with repeated and longer-term customer contacts (Bathelt et al. 2017).

Additionally, there are substantial risks involved in engaging in interactions right away when exhibitors and buyers meet for the first time at a trade fair, as their knowledge about the new partner is limited and trust has not yet developed (Maskell 2014). To reduce the risks in such transactions, exhibitors and visitors have a strong incentive to get to know each other better and find out about each other's competencies and capabilities

(Bathelt et al. 2017). This can be achieved by inspecting the production facilities, exchanging knowledge about each other and inquiring about each other's reputation with third parties (Glückler and Armbrüster 2003). Exhibitors need more information about potential buyers and vice versa before further commitments are made. The more collaboration and input are necessary to manufacture the products according to users' needs the more likely longer-term relations between the partners develop. Sometimes joint product development will be the next step in such relations involving complex knowledge transfers on both sides. Such embedded relations and networks, of course, do not fit the neoclassical idea of a pure market relation. In fact, they are as much market relations as they are production linkages. As such, a process can be identified of how production networks develop under certain conditions from market relations that originate at trade fairs. Short-term encounters in temporary proximity at trade fairs thus lead to longer-term social relations over distance as commitments increase. While not every exhibitor engages in such relationships with every buyer, similar mechanisms generally do play a role in globalization processes as firms extend their global reach. The processes of developing such network linkages take times and may evolve in several stages as trust gradually develops over time (Lorenz 1999).

In corollary, processes of production and marketing/sales, which represent separate corporate functions, become fully intertwined and need to be governed in an integrated fashion. As trade fairs emerge as crucial catalysts that connect market and production relations, this provides opportunities for or may even require closer collaboration between economic geography and industrial marketing research to better understand the consequences of temporary proximity (Rinallo et al. 2017).

6 Temporary Dynamics and Systemic Stability

The main goal of this chapter has been to demonstrate that economic interaction in temporary proximity generates many opportunities to organize knowledge exchanges, exercise control and support governance challenges in corporate interaction. The chapter supports such arguments in a conceptual way by integrating insights about temporary clusters and temporary markets, related to prior research since the mid-2000s. While the empirical basis of the findings presented is in many cases still preliminary and needs further rigorous testing, what gradually emerges are the foundations of a theory of how different forms of temporary proximity, temporary clusters and temporary markets affect knowledge creation processes over distance (Bathelt and Henn 2014).

Most of this chapter explains why trade fairs present unique opportunities for firms to exchange knowledge, find suppliers and customers and learn about technological and market changes. Such opportunities cannot be easily replicated in permanent industry settings. Crucial advantages of trade fairs revolve around their temporary character that enables broad geographical participation of the members of an organizational field. From an exhibitor perspective, these events are in the first place temporary markets with a downstream market orientation and knowledge linkages that differ according to the type of event (Rinallo and Golfetto 2011). However like other temporary gatherings, trade fairs can also be viewed as temporary clusters in an upstream perspective that allow firms to draw conclusions regarding their production and innovation processes. The events are characterized by knowledge linkages that are similar to those found in permanent clusters (Maskell et al. 2006). As a consequence, they offer manifold learning opportunities for the attendees related to and driven by specific knowledge ecologies or global buzz (Bathelt et al. 2014; Bathelt and Schuldt 2010). As discussed in this chapter, global buzz results from the global co-presence of the members of an organizational field, manifold

opportunities for intensive face-to-face interaction and dense observations, a shared institutional context of intersecting communities, as well as multiplex meetings and relationships at the events.

Global buzz is particularly created during international flagship fairs, or global hub events, which are focused on knowledge exchanges and innovation. However, this global buzz also spreads to other events and leads to knowledge and innovation dynamics that even extend to market-driven events. Even large market fairs are characterized by product differentiation dynamics as participants need to engage in short-term knowledge exchanges to find the most fitting transaction partners among a large number of attendees (Callon 2017). In these exchanges, past entanglements related to the production conditions are linked with future entanglements in the user context (Callon 1998), thus creating global buzz and massive knowledge spillovers. These spillovers form the basis for future product variations and development activities that show up at future events as exhibitors try to learn from earlier experience to attract more buyers and become more efficient in finding partners. Once linkages are made between producers and users, there is a strong incentive for both to continue their collaboration and engage in longer-term interaction (Bathelt et al. 2017). As market relations become more embedded over time, they are transformed into production linkages and networks over distance with increasingly complex knowledge exchanges.

The dynamics that go along with trade fairs might lead us to assume that constantly new products and technologies show up at these events which are then picked up by the attendees and lead to a broad and fast diffusion of the latest products at a global level. However, at closer investigation, processes of ubiquitification (Maskell and Malmberg 1999) are not necessarily a dominant consequence of the technological choices made at trade fairs. In fact, empirical studies of trade fairs have shown that attendees often do not know in advance or have only vague ideas of what technologies they are looking for when entering these events (Bathelt and Gibson 2015). When viewing trade fairs as organized anarchies, it becomes clear that technological learning processes at these events are not precisely targeted or based on systematic search process. Following the garbage-can model of organizational choice (Cohen et al. 1972), trade fairs can be perceived as organized anarchies since there is a constant coming and going of attendees, the preferences of the participants are not completely clear and the attendees do not have a precise idea how to select products and technologies from the broad offerings. Under these conditions, participants do not search specifically for optimal or other best-practice solutions to their most pressing problems. Rather, they view the exhibits as a stream of potential solutions from which they pick those that they can easily connect with their pre-existing structure. As mentioned in interviews, they know what they can use in their production, and how, once they see it – but not before (Bathelt and Gibson 2015). In other words, they select from exhibited products and technologies those they can make most sense of in the context of their production arrangements. This implies that the outcome of technical choices also depends on the roles, skill-sets and experiences of individual participants. Their choices address specifically technologies that fit existing structures, strategies and experiences in their operations. While new technologies are of course important, they are viewed and evaluated with reference to the specific production context, where they would eventually be used. The technological choices made at trade fairs therefore lead to and support ongoing specialization processes (Storper 1997) rather than a context-free and borderless diffusion of new technologies.

Since firms are embedded in macro arrangements of how their factories are set-up, what division of labor is implemented and how capital-labor relationships are organized, these arrangements also play out in the search processes for new technologies. For instance, while the German political economy is organized in a way that encourages stable collaborative production relations, distributed decision-making competencies and ongoing incremental learning processes, the US economy pays more attention to the ability to support flexible production arrangements that enable disruptive innovation and quick adjustments to market changes (Hall and Soskice 2001). Since these characteristics have a deep impact on the organization of economic processes, the specific

systems of production and innovation (Lundvall 1992; Nelson 1993) also impact the type of technological searches at trade fairs. In this context, a recent study found that German firms tend to look more for top-of-line and customized products at such events while US firms have a stronger orientation toward cost-effective solutions and new innovations (Gibson 2018). This does not suggest that a deterministic relationship exists but speaks to the contextualization of technological choices that strengthen path dependent processes (Storper 1997).

In other words, while trade fairs are characterized by and, at the same time, partial drivers of intrinsic innovation dynamics that play out in constantly changing products and technologies, they do not lead to strong convergence processes in the diffusion of best practices and technologies, or ubiquitification (Maskell and Malmberg 1999). Rather firms will pick up those developments and solutions that best fit their existing production structure and strategy and will apply technological novelties in specific ways that are consistent with their production context. As such, trade fairs influence and strengthen specialization processes but do not enforce convergence toward a single development path. Since firms operate within different technology regimes and national systems that influence their choices, these events support the stabilization of multiple pathways in the global economy (Bathelt and Gibson 2015; Storper 1997; Vendrusculo 2016). The existence of multiple pathways is in fact one of the main rationales as to why the participation in international trade fairs is so important and why it facilitates learning opportunities that could not be accessed in a different spatial context (Bathelt 2011) as firms from different national production contexts do not routinely exchange knowledge nor compare each other's products and technologies in such an intensive manner.

Acknowledgements

I would like to thank Maximilian Buchholz and Sebastian Henn for providing thoughtful feedback on a draft version of this chapter. I apologize for many self-citations in the text which result from the attempt to combine central findings and conceptualizations from my past research on temporary proximity into a broader theoretical framework. In this respect, I owe many thanks to my research collaborators who have, over the years, engaged in myriads of discussions with me and from whom I have learned a lot. This working paper is conceptualized as a contribution in Torre, A., and Gallaud, D. (eds.) (forthcoming): *Handbook on Proximity Relations*. Edward Elgar, Cheltenham.

References

- Allix, A. (1922): The geography of fairs: Illustrated by old-world examples. *Geographical Review* **12**: 532-569.
- Amin, A., and Cohendet, P. (2004): *Architectures of Knowledge. Firms, Capabilities, and Communities*. Oxford University Press, Oxford.
- Aspers, P., and Darr, A. (2011): Trade shows and the creation of market and industry. *Sociological Review* **59**: 758-778.
- Audretsch, D. B., and Feldman, M. P. (1996): R&D spillovers and the geography of innovation and production. *American Economic Review* **86**: 630-640.
- Bathelt, H. (2011): International trade fairs and world cities: Temporary vs. permanent clusters. In Taylor, P., Derudder, B., Hoyler, M., and Witlox, F. (eds.): *International Handbook of Globalization and World Cities*, 177-188. Edward Elgar, Cheltenham.
- Bathelt, H. (2017): Trade fairs and innovation. In Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (eds.): *The Elgar Companion to Innovation and Knowledge Creation*, 509-521. Edward Elgar, Cheltenham.
- Bathelt, H., and Gibson, R. (2015): Learning in "organized anarchies": The nature of technological search processes and knowledge flows at international trade fairs. *Regional Studies* **49**: 985-1002.
- Bathelt H., Golfetto F., and Rinallo D. (2014): *Trade Shows in the Globalizing Knowledge Economy*. Oxford University Press, Oxford.
- Bathelt, H., and Henn, S. (2014): The geographies of knowledge transfers over distance: Toward a typology. *Environment and Planning A* **46**: 1403-1424.
- Bathelt, H., Li, P., and Zhu, Y.-W. (2017): Geographies of temporary markets: An anatomy of the Canton Fair. *European Planning Studies* **25**: 1497-1515.
- Bathelt, H., Malmberg, A., and Maskell, P. (2004): Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography* **28**: 31-56.
- Bathelt, H., and Schuldt, N. (2008): Between luminaires and meat grinders: International trade fairs as temporary clusters. *Regional Studies* **42**: 853-868.
- Bathelt, H., and Schuldt, N. (2010): International trade fairs and global buzz – Part I: Ecology of global buzz. *European Planning Studies* **18**: 1957-1974.
- Bathelt, H., and Turi, P. (2011): Local, global and virtual buzz: The importance of face-to-face contact and possibilities to go beyond. *Geoforum* **42**: 520-529.
- Beaverstock, J. V., Derudder, B., Faulconbridge, J., and Witlox, F. (2009): International business travel: Some explorations. *Geografiska Annaler B* **91**: 193-202.

- Berndt, C., and Boeckler, M. (2009): Geographies of circulation and exchange: Constructions of markets. *Progress in Human Geography* **33**: 535-551.
- Bilgram, V., Brem, A., and Voigt, K.-I. (2008): User-centric innovations in new product development: Systematic identification of lead users harnessing interactive and collaborative online-tools. *International Journal of Innovation Management* **12**: 419-458.
- Blythe, J. (2002): Using trade fairs in key account management. *Industrial Marketing Management* **31**: 627-635.
- Borghini S., Golfetto F., and Rinaldo D. (2006): Ongoing search among industrial buyers. *Journal of Business Research* **59**: 1151-1159.
- Borghini, S., Golfetto, F., and Rinaldo, D. (2014): *Using Anthropological Methods to Study Industrial Marketing and Purchasing. An Exploration of Professional Trade Shows*. SPACES 2014-02. Toronto, Heidelberg. http://www.spaces-online.uni-hd.de/include/SPACES_2014-03%20Golfetto_Rinaldo.pdf (26.10.2013)
- Braudel, F. (1979): *Le jeux de l'échange: Civilisation matérielle, économie et capitalisme, xv-xviii siècle* [The Wheels of Commerce: Civilization & Capitalism 15th-18th Century]. Colin, Paris.
- Callon, M. (1998): Introduction: The embeddedness of economic markets in economics. In Callon, M. (ed.): *The Laws of the Markets*, 1-57. Blackwell, Oxford.
- Callon, M. (2017): Markets, marketization and innovation. In Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (eds.): *The Elgar Companion to Innovation and Knowledge Creation*, 589-609. Edward Elgar, Cheltenham.
- Cohen, M. D., March, J. G., and Olsen, J. P. (1972): A garbage can model of organizational choice. *Administrative Science Quarterly* **17**: 1-25.
- Cohendet, P., Héraud, J.-A., and Llerena, P. (2013): A microeconomic approach of the dynamics of creation. In Meusburger, P., Glückler, J., and el Meskioui, M. (eds.): *Knowledge and Economy*, 43-59. Knowledge and Space, Vol. 5. Dordrecht: Springer.
- DiMaggio, P. J., and Powell, W. W. (1983): The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* **48**: 147-160.
- Entwistle, J., and Rocamora, A. (2006): The field of fashion materialized: A study of London Fashion Week. *Sociology* **40**: 735-751.
- Gibson, R. (2018): *Dynamic Capitalisms? Understanding Patterns of Technological Specialization through an Exploration of Interfirm Interaction at International Trade Fairs*. Ph.D. thesis. University of Toronto, Toronto.
- Glückler, J., and Armbrüster, T. (2003): Bridging uncertainty in management consulting: The mechanisms of trust and networked reputation. *Organization Studies* **24**: 269-297.

- Glückler, J., and Bathelt, H. (2017): Institutional context and innovation. In Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (eds.): *The Elgar Companion to Innovation and Knowledge Creation*, 421-439. Edward Elgar, Cheltenham.
- Golfetto, F. (1991): *L'impatto economico delle manifestazioni fieristiche* [The Economic Impact of Trade Shows]. EGEA, Milan.
- Golfetto, F. (2004): *Fiere e Comunicazione. Strumenti per le Imprese e il Territorio* [Trade Fairs and Communication. Tools for Business, Venues and Host Areas]. EGEA, Milan.
- Hall, P. A., and Soskice, D. W. (ed.) (2001): *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*. Oxford University Press, Oxford.
- Henn, S. (2012): Transnational entrepreneurs, global pipelines and shifting production patterns: The example of the Palanpuris in the diamond sector. *Geoforum* **43**: 497-506.
- Jin, X., and Weber, K. (2008): The China Import and Export (Canton) Fair: Past, present, and future. *Journal of Convention and Event Tourism* **9**: 221-234.
- Kirchgeorg, M. (2003): Funktionen und Erscheinungsformen von Messen [Functions and types of trade shows]. In Kirchgeorg, M., Dornscheidt, W. M., Giese, W., and Stoeck, N. (eds.): *Handbuch Messemanagement. Planung, Durchführung und Kontrolle von Messen, Kongressen und Events* [Handbook of Trade Show Management. Planning, Execution and Control of Trade Shows, Conventions and Events], 51-72. Gabler, Wiesbaden.
- Knorr Cetina, K. (1999): *Epistemic Cultures. How the Sciences Make Sense*. Chicago University Press, Chicago.
- Li, L.-Y. (2006): Relationship learning at trade shows: Its antecedents and consequences. *Industrial Marketing Management* **35**: 166-177.
- Li, P. (2014): Global temporary networks of clusters: Structures and dynamics of trade fairs in Asian economies. *Journal of Economic Geography* **14**: 995-1021.
- Li, P. (2015): Temporary clustering in developing economies: Trade fairs in South and Southeast Asia. In Bathelt, H., and Zeng, G. (eds.): *Temporary Knowledge Ecologies. The Rise and Evolution of Trade Fairs in the Asia-Pacific Region*, 93-112. Edward Elgar, Cheltenham.
- Li, P., and Bathelt, H. (2017): From temporary market to temporary cluster: Evolution of the Canton Fair. *Area Development and Policy* **2**: 154-172.
- Lorenz, E. (1999): Trust, contract and economic cooperation. *Cambridge Journal of Economics* **23**: 301-315.
- Lundvall, B.-Å. (ed.) (1992): *National Systems of Innovation. Towards a Theory of Innovation and Interactive Learning*. Pinter, London.
- Luo, Q., and Zhong, D. (2016): Knowledge diffusion at business events: A case study. *International Journal of Hospitality Management* **55**: 132-141.

- Malecki, E. J. (2010): Global knowledge and creativity: New challenges for firms and regions. *Regional Studies* **44**: 1033-1052.
- Maskell, P. (2014): Accessing remote knowledge: The roles of trade fairs, pipelines, crowdsourcing and listening posts. *Journal of Economic Geography* **14**: 883-902.
- Maskell, P., Bathelt, H., and Malmberg, A. (2006): Building global knowledge pipelines: The role of temporary clusters. *European Planning Studies* **14**: 997-1013.
- Maskell, P., and Malmberg, A. (1999): The competitiveness of firms and regions: Ubiquitification and the importance of localised learning. *European Urban and Regional Studies* **6**: 9-25.
- Meffert, H. (1993): Messen und Ausstellungen als Marketinginstrument [Trade fairs and exhibitions as a marketing instrument]. In Goehrmann, K. E. (ed.): *Polit-Marketing auf Messen* [Political Marketing at Trade Fairs], 74-96. Wirtschaft und Finanzen, Düsseldorf.
- Merkel, J. (2017): Coworking and innovation. In Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (eds.): *The Elgar Companion to Innovation and Knowledge Creation*, 570-586. Edward Elgar, Cheltenham.
- Nelson, R. R. (ed.) (1993): *National Innovation Systems. A Comparative Analysis*. Oxford University Press, Oxford.
- Norcliffe, G., and Rendace, O. (2003): New geographies of comic book production in North America: The new artisans, distancing, and the periodic social economy. *Economic Geography* **79**: 241-273.
- Panitz, R., and Glückler, J. (2017): Rewiring global networks in local events: Congresses in the stock photo trade. *Global Networks* **17**: 147-168.
- Pinch, S., Henry, N., Jenkins, M., and Tallmann, S. (2003): From "industrial districts" to "knowledge clusters": A model of knowledge dissemination and competitive advantage in industrial agglomerations. *Journal of Economic Geography* **3**: 373-388.
- Power, D., and Jansson, J. (2008): Cyclical clusters in global circuits: Overlapping spaces in furniture trade fairs. *Economic Geography* **84**: 423-448.
- Prüser, S. (1997): *Messemarketing. Ein netzwerkorientierter Ansatz* [Trade Fair Marketing: A Network Approach]. Deutscher Universitäts-Verlag, Wiesbaden.
- Rallet, A., and Torre, A. (2009): *Temporary Geographical Proximity for Business and Work Coordination. When, How and Where?* SPACES 2009-02. Toronto, Heidelberg. http://www.spaces-online.uni-hd.de/include/SPACES%202009-02%20Rallet_Torre.pdf (26.10.2019)
- Rallet, A., and Torre, A. (2017): Geography of innovation, proximity and beyond. In Bathelt, H., Cohendet, P., Henn, S., and Simon, L. (eds.): *The Elgar Companion to Innovation and Knowledge Creation*, 421-439. Edward Elgar, Cheltenham.
- Ramírez-Pasillas, M. (2008): Resituating proximity and knowledge cross-fertilization in clusters by means of international trade fairs. *European Planning Studies* **16**: 643-663.

- Rinallo, D., Bathelt, H., and Golfetto, F. (2017): Economic geography and industrial marketing views on trade shows: Collective marketing and knowledge circulation. *Industrial Marketing Management* **61**: 93-103.
- Rinallo, D., and Golfetto, F. (2006): Representing markets: The shaping of fashion trends by French and Italian fabric companies. *Industrial Marketing Purchasing* **35**: 856-869.
- Rinallo, D., and Golfetto, F. (2011): Exploring the knowledge strategies of temporary cluster organizers: A longitudinal study of the EU fabric industry trade shows (1986-2006). *Economic Geography* **87**: 453-476.
- Rosson, P. J., and Seringhaus, F. H. R. (1995): Visitor and exhibitor interaction at industrial trade fairs. *Journal of Business Research* **32**: 81-90.
- Saxenian, A. (2006): *The New Argonauts. Regional Advantage in a Global Economy*. Harvard University Press, Cambridge.
- Scott, A. J. (1988): *New Industrial Spaces. Flexible Production Organization and Regional Development in North America and Western Europe*. Pion, London.
- Sharland, A., and Balogh, P. (1996): The value of nonselling activities at international trade shows. *Industrial Marketing Management* **25**: 59-66.
- Short, J., Williams, E., and Christie, B. (1976): *The Social Psychology of Telecommunications*. Wiley, New York.
- Storper, M. (1997): *The Regional World. Territorial Development in a Global Economy*. Guilford Press, New York.
- Storper, M., and Venables, A. J. (2004): Buzz: Face-to-face contact and the urban economy. *Journal of Economic Geography* **4**: 351-370.
- Storper, M., and Walker, R. (1989): *The Capitalist Imperative. Territory, Technology, and Industrial Growth*. Basil Blackwell, New York.
- Torre, A., and Rallet, A. (2005): Proximity and localization. *Regional Studies* **39**: 47-59.
- Uzzi, B. (1997): Social structure and competition in interfirm networks: The paradox of embeddedness. *Administrative Science Quarterly* **42**: 35-67.
- Vendrusculo, F. D. C. (2016): *The Role of Trade Fairs in the Brazilian Health Industry Complex*. Presented at the Annual Meeting of the Association of American Geographers, San Francisco.
- Weber, A. (1909): *Über den Standort der Industrien. Erster Teil: Reine Theorie des Standorts*. Mohr (Siebeck), Tübingen.
- Wenger, E. (1998): *Communities of Practice. Learning, Meaning, and Identity*. Cambridge University Press, Cambridge.
- Wickham, J., and Vecchi, A. (2008): Local firms and global reach: Business air travel and the Irish software cluster. *European Planning Studies* **16**: 693-710.

- Zeng, G., and Bathelt, H. (2015): Asia-Pacific trade fair dynamics: An introduction. In Bathelt, H., and Zeng, G. (eds.): *Temporary Knowledge Ecologies. The Rise and Evolution of Trade Fairs in the Asia-Pacific Region*, 1-16. Edward Elgar, Cheltenham.
- Zerbini, F., and Borghini, S. (2012): Release capacity in the vendor selection process. *Journal of Business Research* **68**: 405-414.
- Zhong, D., and Luo, Q. (2018): Knowledge diffusion at business events: The mechanism. *International Journal of Hospitality Management* **71**: 111-119.
- Zhu, Y.-W., Bathelt, H., and Zeng, G. (2020): Are trade fairs relevant for local innovation knowledge networks? Evidence from Shanghai equipment manufacturing. *Regional Studies* **54**, forthcoming.