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Entrepreneurial ecosystems as a bridging concept? A conceptual contribution to the debate on entrepreneurship and regional development

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Abstract

This paper explores the potential of considering entrepreneurial ecosystems as a bridging concept that enables a trans-disciplinary exchange. We aim to contribute to the debate by offering a perspective that takes entrepreneurial ecosystems out of their systemic—often geographically fixed—notion of administrative and territorial boundaries by offering a novel conceptual understanding of it. So far, entrepreneurial ecosystems are appreciated for first exhibiting conceptual strengths in terms of integrating entrepreneurs as economic actors (rather than firms as the smallest unit of analysis), and, second, considering entrepreneurship as a process that focuses on the co-evolution of entrepreneurial activities and their institutional environment. Criticism of this concept arises on its simplification by translating social elements into entrepreneurial ecosystem terminologies and on focusing on quantifiable indicators for measuring and comparing regional ecosystems rather than appreciating the complexity and interrelatedness of qualitative dimensions and their temporal dynamics. Against this background, we first argue for expanding the debate on entrepreneurial ecosystems by paying particular attention to the spatial as well as to temporal dynamics of entrepreneurship and its environment. Second, we regard entrepreneurial ecosystems as a communicative bridge that enables a fruitful exchange

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between academic disciplines and practitioners rather than approaching the concept as a mono-disciplinary theoretical framework.

1 | INTRODUCTION

Entrepreneurial ecosystems have been conceptualised in multiple academic disciplines, such as economic geography and sociology, management and organisation studies. Even though these conceptualisations are still comparatively young, the conceptual basis is rarely debated (e.g., Mack & Mayer, 2016; Spigel, Kitigawa, Mason, & Izushi, 2020). In addition, the conceptual contributions seem to have been easily transferable into practical tools and instruments for regional economic development, which is why practitioners have appreciated the concept early on and picked up the terminology into their vocabulary (e.g., European Commission, 2019; Mason & Brown, 2014; OECD, 2014; Scotlandcdo, 2018) and into tools that aim to foster entrepreneurial ecosystems (e.g., “Startup Lisboa” or pan-European “Startup-Monitor,” see European Commission, 2019): A wide, though relatively unsorted range of makers, start-ups, freelancers, and digital entrepreneurs are regarded as innovation drivers within a region, regardless of how selective and situational they interact and how they are embedded in regional contexts. They are addressed and seen as being responsible for regional progress and growth. Thus, “ecosystems” has become a metaphor for a rich, diverse, and fertile institutional environment that fosters entrepreneurship within a given region, conceptualising region as a container rather than a socio-dynamic and socio-spatially flexible entity. The concept's attractiveness in the context of start-up ecologies and the seemingly easy to understand biomorphic terminologies (Kuckertz, 2019) in practical fields of urban and regional planning or urban economic development have probably protected the concept from too early criticism. Furthermore, the attractive linguistics of the term creates positive association of quasi natural and sustainable growth which even increases its attractiveness and both, academic and practical application thus leading to sometimes enclosed conceptual orthodox academic debates (Murcia et al., 2014).

While already integrated in the vocabulary of, for example, entrepreneurs, start-ups, and regional as well as economic developers, academic debates still struggle to understand and conceptualise necessary institutional preconditions for regional entrepreneurship with an ecosystem perspective. This is, however, challenging for case-sensitive and place-based regional policies because the conceptual cornerstones of entrepreneurial ecosystems are still evolving and originate from different disciplinary angles while a substantial and independent evaluation of the feasibility of this concept in respect to any other regional policies is still missing.

In the context of this special issue, we aim to contribute to the debate by offering a perspective that takes entrepreneurial ecosystems out of their systemic—oftentimes geographically fixed notion of administrative and territorial boundaries by offering a novel conceptual understanding of it. We argue for a multi-scalar spatial dimension, thus taking the concept out of a purely regional or local perspective. Furthermore, we underline a temporal perspective for better understanding the interplay between multiple spatial dimensions in the course of time. We thereby regard entrepreneurial ecosystems not as a rigid theoretical concept, but rather as an instrument that creates bridges to other academic disciplines as well as practitioners' range of interventions. In other words, we interpret entrepreneurial ecosystems as a bridging concept that not only opens a communicative trans-disciplinary exchange, but also allows to integrate novel dynamic temporal and spatial elements to otherwise rather strict spatial

boundaries of the concept. Within this tension this paper offers two contributions that are summarised in the following Table 1.

First, we stress that the particular value of the entrepreneurial ecosystems' perspective lies in its multidisciplinary approach. From our point of view, the entrepreneurial ecosystem concept may function as a bridge that literally spans, constructs, and fosters mutual dialogues between various academic and practice-oriented positions. It therefore resembles a boundary object (Baggio, Brown, & Hellebrandt, 2015; Oswick & Robertson, 2009; Star & Griesemer, 1989) which allows interdisciplinary groups to exchange (even without consent). Such trans-disciplinary dialogues are—according to our experience—missing so far in order to fully grasp the benefits of an entrepreneurial ecosystem's perspective (Figure 1).

Our second contribution addresses two particular conceptual pillars of this bridge: We argue that an explicitly *dynamic spatial perspective* (e.g., Kuebart & Ibert, 2019) benefits a procedural take on understanding entrepreneurial processes within and across ecosystems. Furthermore, a temporal perspective (Auschra, Schmidt, & Sydow, 2019; Ibert, 2010; Mack & Mayer, 2016; Orlikowski & Yates, 2002; Taylor & Spicer, 2007) offers promising conceptual expansions by shedding light on the formation and evolution of ecosystems beyond their geographical fixation.

We introduce and discuss these two pillars of the conceptual bridge to enable a fruitful and valuable interdisciplinary debate that helps to overcome spatio-structural as well as a spatio-temporal fixations. From our point of view, static approaches to space and time fail to understand the broader context of emerging and evolving ecosystems, because they cannot appreciate dynamic, diverse, and interconnected regional and trans-regional stakeholders who create a social context for entrepreneurial endeavours (Cohen, 2006; Mack & Mayer, 2016; Spigel, 2017; Stam, 2015). We therefore highlight the role of time-spatial processes of contingent and open community building, changing situative, and adaptive partnerships in flexible collaborative arrangements (de Bruin, Shaw, & Lewis, 2017).

The paper is organised as follows. We first demonstrate how the entrepreneurial ecosystem concept may be regarded as a bridging concept by briefly addressing the concept as a trans-disciplinary research object. However, a full literature review would go beyond the scope of this paper and has been provided within disciplinary discourses elsewhere (for business studies compare, e.g., Brown & Mason, 2017; for economic geography compare, e.g., Malecki, 2018; Schäfer & Mayer, 2019). We then illuminate the multiplicity of perspectives and emphasise how a particular dynamic spatial and temporal perspective may offer promising bridging functions. Wherever suitable, we provide

TABLE 1 Chain of reasoning in our paper on entrepreneurial ecosystems (EES)

	Entrepreneurial ecosystem as a concept	Entrepreneurial ecosystem as a bridging concept
Spatial dimensions	Territory (e.g., city or region)	Dynamic spatialities (e.g., of entrepreneurial activities, practices and networks in e.g., micro-spaces)
Temporal dimensions	Entrepreneurship as a process	Entrepreneurial as a flux of dynamic temporal constellations (e.g., events)
Main contribution	Conceptual contribution that captures entrepreneurship outside the constraints of firms in space	Entrepreneurial ecosystem as a communicative too across disciplines to engage with temporal and spatial dynamics of entrepreneurship
Main challenge	Diversification and decoupling of discourses within disciplinary constraints	Generalisation and dilution of the core concept

Source: Authors.

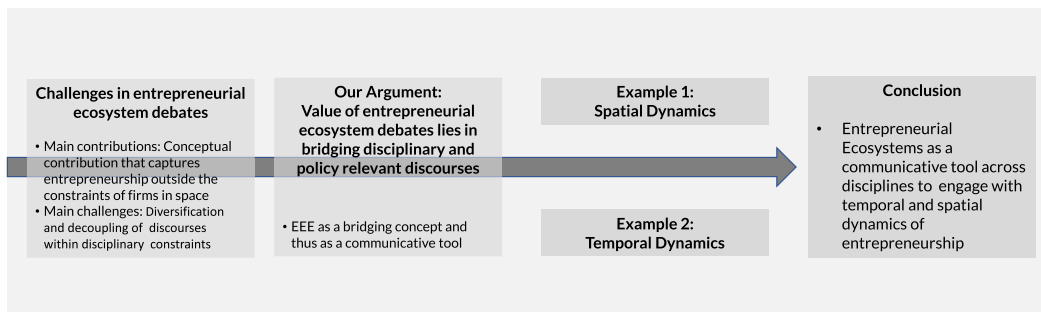


FIGURE 1 Chain of reasoning in our paper on entrepreneurial ecosystems (EES)

empirical examples of data stemming from divers research endeavours, even though this paper provides a clear conceptual rather than empirical contribution.

2 | ENTREPRENEURIAL ECOSYSTEMS AS A MULTIDISCIPLINARY RESEARCH OBJECTS

2.1 | Space and time in entrepreneurial ecosystems

Even though a broadly shared definition of entrepreneurial ecosystems has still to be provided, two defining assumptions seem to be shared by contributors across disciplines: First, entrepreneurial ecosystem conceptualisations are based on a system-based understanding of becoming, initiating, and inventing entrepreneurship (Ács, Autio, & Szerb, 2014; Neck, Meyer, Cohen, & Corbett, 2004; Spilling, 1996). Entrepreneurship is thus regarded as a process that occurs over time comprising processes of identifying markets, initiated by observing and reacting to entrepreneurial competition and by exploiting entrepreneurial opportunities. A procedural perspective on entrepreneurship implies that entrepreneurial processes have distinct origins and meaningful pasts, and thus, begin before the instance in which a firm is founded, or an entrepreneur launches his/her approach (García-Rodríguez, Gil-Soto, Ruiz-Rosa, & Gutiérrez-Taño, 2017). Following Spilling (1996), the social and economic dynamics of such entrepreneurial systems create an entrepreneurial climate and a Marshallian-like atmosphere with self-reinforcing effects. Second, from a spatial perspective, entrepreneurial systems are so far foremost investigated at regional or local level:

Entrepreneurial ecosystems are combinations of social, political, economic, and cultural elements within a region that support the development and growth of innovative startups and encourage nascent entrepreneurs and other actors to take the risks of starting, funding, and otherwise assisting high-risk ventures.

(Spigel, 2017, p. 50)

Therefore, empirical contributions seek to identify, measure, and evaluate entrepreneurship within pre-defined spatial delineations ranging from administrative regions such as particular cities or statistical areas such as NUTS–regions in Europe or metropolitan statistical areas in the United States. Entrepreneurship is then measured based on, for example, output factors (number of firm foundations, self-employment, and foreign direct investments, as well as venture capital), attempts to depict entrepreneurial attitudes (e.g., the

Global Entrepreneurship Monitor) or on identifying supporting framework conditions in a given region (Ács et al., 2014).

In contrast to neighbouring spatial concepts such as territorial innovation models (Moulaert & Sekia, 2003), creative city approaches (Cooke & Lazzeretti, 2008; Førde, 2019; McRobbie, 2015; Pratt, 2009), or clusters (Porter, 2000), the entrepreneurial ecosystem thinking tries to revoke too much conceptual proximity to these by defining the entrepreneur as the smallest unit of analysis (Stam, 2015) in contrast to firms and other organisational forms. From a time-spatial perspective, entrepreneurs can be regarded as actors associated with learning processes to help their entrepreneurial venture to mature over time and to acquire new skills and competencies to advance the respective entrepreneurial projects (García-Rodríguez et al., 2017). This approach to entrepreneurship indicates a dynamic spatial perspective rather than a regional one by integrating, for instance, conceptual dimensions for learning spaces into entrepreneurial ecosystems' thinking (Rae, 2006; Schüßler, Grabher, & Müller-Seitz, 2015). In fact, while on a conceptual level this dynamisation of the entrepreneurial ecosystem concept is still work in process, policy realms are quicker to create that bridge. There, for instance, coworking spaces (Capdevila, 2015), maker spaces (Benton, Mullins, Sheley, & Dempsey, 2013), fab labs, open workshops (Lange & Bürkner, 2018; Schmidt & Brinks, 2017), and start-up accelerators (Bliemel, Flores, De Klerk, & Miles, 2019; Gertner & Mack, 2017) are regarded as vital instruments for creating a supportive institutional environment within entrepreneurial ecosystems. In contrast, academic works thereof seldom link up to entrepreneurial ecosystem debates, but instead create rather independent and mono-disciplinary discussions.

2.2 | Entrepreneurial ecosystems as a bridging concept— Conceptual potentials

Based on above observations, we find the entrepreneurial ecosystem concept to be handled as a rather novel approach to regional and trans-regional economic processes. It stands for a new reading that captures recent economic and entrepreneurial dynamics in knowledge and creativity economies. It is broad enough for various disciplines to develop their own, inner-disciplinary discourses rather than exchanging each other to explore the interdisciplinary value. It contained notion, that captures a “regional,” and thus, geographically bounded system which contains various institutions and actors, seems appealing for practitioners who have started framing their regions as ecosystems and seek to establish an institutional environment supportive to entrepreneurship and start-up-teams.

Against this background we argue that the entrepreneurial ecosystems concept as such unfolds its value not “only” as a place-specific concept for urban and regional development. Instead, from our point of view, it offers a communicative, and thus, epistemic set of dialogical elements across disciplines. Thinking this further, we want to enrich existing contributions from diverse academic disciplines and their spatial and temporal perspectives on entrepreneurship. We regard entrepreneurial ecosystems as a bridging concept (Deppisch & Hasibovic, 2013) which offers us a lens to address recent analytical problems—mainly struggling with refined spatial and temporal dynamics—by offering novel approaches for doing so. As a bridging concept, entrepreneurial ecosystem concepts function as a communicative tool that sheds light on empirically informed conceptualisations, on the one hand, and on policy realms, on the other hand (e.g., Baggio et al., 2015; Brondizio et al., 2016; Morgan & Olsen, 2008). The recent attention on and with entrepreneurial ecosystems indicates a worldwide economic transformation that materialises in the following aspects:

- increasing translocal and less place-based economic activities, and therefore, highly spatially distributed innovation processes.
- project-driven processes (Grabher, 2002; Kovách & Kučerova, 2009) and thereby temporary institutional frameworks for work favouring temporary and situational organisations as well as temporary forms of organising (Bakker, DeFillippi, Schwab, & Sydow, 2016; Lundin & Söderholm, 1995) that disappear when short-term projects end.
- an increasing temporal and spatial fragmentation of work (e.g., gig-economy, Friedman, 2014, co-working economy),
- a seemingly new wave of social and collaborative entrepreneurship (Coulson, 2012; Fabbri & Charue-Duboc, 2013), cultural entrepreneurship (Lange, 2005), and gender sensitive entrepreneurship (Kruker, Schier, & von Streit, 2002) with respectively different social communities and less intersecting communities of practice, and
- a wide range of further actors appearing within “the” system, for example, freelancers, urban manufacturers, makers, micro-enterprises, policy makers, money lenders, venture capitalists as well as knowledge brokers that fosters economic development in urban environments (Brinks & Ibert, 2015; de Bruin et al., 2017; Florida & King, 2016; Montessori, 2016; Shah & Tripsas, 2007; Wolf & Troxler, 2016; Wolf-Powers et al., 2017).

Despite the plurality of perspectives on entrepreneurial ecosystems, all contributions no longer regard firms and organisations as the central unit of analysis in economic development, but instead underpin the role of individuals, segmented communities of practice and changing and shifting temporary actor constellations.

Therefore, traditional concepts, such as territorialised clusters (Bathelt, Malmberg, & Maskell, 2004; Porter, 1990; Power & Jansson, 2008) or territorial-based innovation models, (Crevoisier, 2014; Moulaert & Sekia, 2003) are less applicable to address neo-institutional framings for economic development thus promoting an entrepreneurship perspective that emphasises spatial and temporal dynamics as more appropriate. This shifting perspective stems from an active dialectic between practical development in the field in form of measurable transformations in entrepreneurial dynamics, the need to develop framing institutions to support entrepreneurship where appropriate and interdisciplinary endeavours to explain and conceptualise these dynamics.

Consequently, regarding entrepreneurial ecosystems as a heuristic bridging concept instead of an enclosed and bounded system allows for an understanding that actively links and stimulates exchange between and among policy realms and multiple scientific debates. As such it fosters interdisciplinary and even trans-disciplinary exchange and may link diverse work and practices (Baggio et al., 2015). This allows for elaborating the complexity of social, institutional, and time-spatial dynamics and helps to bridge theory-driven epistemological interests and practical problem solving for creating and shaping institutions supporting entrepreneurial dynamics (Deppisch & Hasibovic, 2013).

So far, we perceive the body of recent contributions to entrepreneurial ecosystems as being rather unspecific in respect to its temporal and spatial dynamics. Against this background, temporality will be introduced in the following as a concept that sheds light on the formation of social events, belonging, and thus, on entrepreneurial phases that differ not only from city to region, but also from time to time. In a similar manner, we argue for a closer look at the distinct spatialities of entrepreneurial processes. The becoming, evolving, adapting, upscaling, and reorienting in the life courses of entrepreneurs are associated with different spatialities and places. In line with the aspect of temporality, we conceptually shed light on the changing and shifting spatial and geographical boundaries from the point of view of the acting entrepreneurs.

3 | SPATIAL DYNAMICS AND EXPANSIONS IN ENTREPRENEURIAL ECOSYSTEMS DEBATES

3.1 | Entrepreneurship and spatial dynamics

Economic geography literature has been addressing the fetishism of spatial fixity for better understanding the temporal diversity and dynamic nature of spatial, cultural, and institutional contexts of entrepreneurial processes (Faulconbridge, 2006; Knobens & Oerlemans, 2006; Kuebart & Ibert, 2019; Lange & Büttner, 2010). However, time-geographical perspectives (Hägerstrand, 1967, 1975) and more recent contributions (Ibert, 2010; Ibert, Hautala, & Jauhiainen, 2015; Lange & Schübler, 2018; Törnqvist, 2004) on procedural perspectives of the temporal nature of spatial processes emphasise that, for example, economic geography still needs to better understand the interplay of multiple social and economic processes in place and space. This addresses both, theoretical as well as empirical work to shed light on the various spatial dynamics, the multiple roles of flexible spatial settings that format economic activities, and subsequent organisational patterns. Economic geography studies have thus flexibilised the complexities of space and place, for example, by investigating microspaces and their curation (Capdevila, 2013; Ettlinger, 2003; Schmidt, 2019).

3.2 | Flexible perspectives on spatial dynamics in entrepreneurial ecosystems: Microspaces as an explanatory category for emergent new places and spaces

Quite regularly, practical applications of the entrepreneurial ecosystem concept consider coworking spaces, maker spaces, fab labs, and start-up accelerators as integral ingredients for fostering and supporting a regional ecosystem. So far, the economic effects of these spaces remain to be quantified, but in light of this paper these microspaces offer a valuable component to the bridging concept, as through these spaces, multiple spatial scales may be related to each other.

Start-up accelerators (Gertner & Mack, 2017; Hochberg, 2016), coworking spaces (Blagoev, Costas, & Kärreman, 2019, online first; Capdevila, 2015; Jamal, 2018; Merkel, 2015; Spinuzzi, 2012), fab labs (Fleischmann, Hielscher, & Merritt, 2016; Roma, Minenna, & Scarcelli, 2017; Scaillerez & Tremblay, 2018), maker spaces (Aldrich, 2014; Benton et al., 2013; Fiorentino, 2018), and other forms of spaces used by individual or collective entrepreneurs may be subsumed under that umbrella term Open Creative Labs (Schmidt, 2019; Schmidt & Brinks, 2017). As such, Open Creative Labs can be conceptualised as collaborative spaces for experimentation and work. They are open to a variety of users regardless of qualification requirements. However, they still exhibit a form of social curation by means of explicit or implicit selection mechanisms (e.g., based on social or thematic fit to the existing user community) (Merkel, 2015). Relating to entrepreneurial ecosystem thinking, Open Creative Labs thus cannot only be regarded as structural elements providing space, technology, and material settings for entrepreneurship. Instead, labs actively contribute to creating social relations within and across entrepreneurial ecosystems, for example, by offering diverse forms of networking opportunities ranging from shared lunches to highly curated workshops, by organising and implementing start-up accelerator programmes and by initiating contacts between young as well as established companies within and outside the region, or by organising events that attract venture capital providers.

Furthermore, considering microspaces such as Open Creative Labs and other collaborative spaces (Boutillier, Capdevila, Dupont, & Morel, 2020) as conceptual elements in entrepreneurial ecosystem thinking also contributes to opening up regional and spatial fixations in recent conceptual

contributions. Taking a procedural perspective on entrepreneurship seriously, entrepreneurship needs to be regarded as a process of becoming, being, and acting as an entrepreneur over time and at different places (Beyes & Steyaert, 2011). This can be framed as a sequence of entrepreneurial events that exceed formal boundaries not only of enterprises, organisations, and institutions (Spilling, 1996), but also of territorial boundaries (Kuebart & Ibert, 2019). In terms of start-ups and new firm foundations, for instance, entrepreneurial events comprise ideation phases presented at a start-up pitch (e.g., in one of the local microspaces), finalising a business model or business plan (by passing an accelerator programme in another microspace elsewhere), presenting a first prototype, or the successful acquisition of venture capital in start-up competition (Feldman, 2001; Kollmann & Kuckertz, 2006; Shapero & Sokol, 1982; Spilling, 1996). Each event may lead to a (temporary) ending of an entrepreneurial process or may mark a transition to a new phase of the entrepreneurial venture that seeks novel spatial, social, and institutional contexts. However, none of these events need to take place within the same place or region. Instead, entrepreneurs frequently participate in accelerator programmes, start-up bootcamps, or present their ideas in competitive pitches for acquiring venture capital organised outside their home region (Ibert & Kuebart, 2018). Tying in with the procedural perspective on knowledge creation (Ibert et al., 2015), entrepreneurs are hence not fixed in and bounded to space, but instead evolve their actions at different places in various social and translocal contexts. Thus, the social dynamics and flexibilities of microspaces are a key to following the complex spatial paths of entrepreneurs, regardless of the type of entrepreneurship.

Microspaces, such as Open Creative Labs, thus create a flexible node between local and translocal sources and resources for entrepreneurship. Not only entrepreneurs temporarily make use of specific labs outside their own venture location. Accelerators and entrepreneurial programmes organised by labs also attract distant mentors, coaches, and venture capital or industry partners. Again, these entrepreneurial resources contribute to entrepreneurial activities within a region, but neither the entrepreneurs nor other participants of labs need to be permanently located within a given administrative region on the long run (Kuebart & Ibert, 2019).

Within the entrepreneurial ecosystem debate, there are only very few contributions addressing such an evolutionary and dynamic character of entrepreneurial ecosystems. Mack and Mayer (2016), for instance, investigate the co-evolution of regional entrepreneurship and the entrepreneurial environment at the example of Phoenix, United States. With their case study they demonstrate how institutional endowment, cultural imprint, political attitudes, support structures, and entrepreneurship co-evolve, mutually engage with each other, and thus, influence each other. This dynamic interplay is initiated by the entrepreneurs' interpretation, social construction, and design of regional institutions and regulatory systems and leads to a regionally unique identity that provides a distinguishable regional profile (Lowe & Feldman, 2017).

Even though this is a first and valuable attempt to combine procedural and spatial perspectives on entrepreneurial ecosystems, this approach could benefit from a spatially more open approach. For instance, as entrepreneurial ventures evolve, supporting networks, business related relationships to partners, suppliers, venture capital providers, or mentors as well as other entrepreneurial activities and practices also co-evolve. While social networks, consisting of family and friends, support early entrepreneurial phases (e.g., planning phase, Aldrich & Yang, 2014), other distinct networks are strategically and purposefully established when entrepreneurial projects advance over time, for example, when business ideas and models are more explicitly framed (Hallen & Eisenhardt, 2012). While social network support most often is characterised by a very local dimension, an increasingly more concrete idea of entrepreneurship goes along with very specific needs for resources and networks that seldom are located within a single region. Thus, networks and business relations tend to grow, not only in

terms of involved entities, but also in terms of spatial dimensions. This does not only lead to new and alternating demands on a supporting institutional and social environment, but also implies new institutional arrangements and regulations for entrepreneurial activities developed and legitimated in other regions and countries.

4 | TEMPORAL DYNAMICS AND EXPANSIONS IN ENTREPRENEURIAL ECOSYSTEMS DEBATES

4.1 | The role of social gatherings and temporary events as explanatory categories for flexible ecosystems

Scholars from economic geography, management and organisational studies conceptualised real-time-based social interactions, such as professional gatherings, as “temporary clusters” (Maskell, Bathelt, & Malmberg, 2006, p. 2) or “cyclical clusters” (Power & Jansson, 2008, p. 426). These works suggest that many knowledge dynamics central to permanent spatial clustering and agglomeration, and thus, entrepreneurial activities can clearly be observed at temporary occasions such as trade fairs, conferences, and conventions (Bathelt, 2006; Bathelt et al., 2004; Maskell et al., 2006; Schuldt & Bathelt, 2009; Storper & Venables, 2004). Maskell et al. (2004), therefore, conceptualised trade fairs as temporary “clusters,” “*because they are characterized by knowledge-exchanging mechanisms similar to those found in permanent clusters, albeit in a short-lived and intensified form*” (Maskell et al., 2006, p. 2). Their time-based work makes a convincing argument for the role of temporality that can be observed in trade fairs and (ir-)regular fairs, as places of knowledge exchange and creation platforms for industries where links between global and local fields of actions are important.

They furthermore argue—with respect to the role of time—that fairs, conferences, and market presentations represent important complementary social events, even in industries where strong localised clusters dominate knowledge dynamics and production. Consequently, such events of temporary clusterings create temporarily bounded organisational and spatial manifestations of an economic field, fostering competition, and potentially igniting entrepreneurial activities. Following this line of thinking, the importance of face-to-face interaction within temporary events and their clustering effects can be stressed. This may substitute and/ or constitute a possible strategy to complement local interaction on a temporary basis in rather permanent clusters. The cultural anthropologist Skov (2006) mirrors this idea with her metaphor of “temporary townships” (Skov, 2006, 765) in order to shed light on various kinds of spatialised social encounters of intense knowledge exchange, social network building, and idea facilitation comparable to social interaction processes that take place in more durable and lasting regional clusters (Cope, 2005; Engel, Kaandorp, & Elfring, 2017; Shah & Tripsas, 2007).

In the last years, the time- and interaction-based concept of “field-configuring events”—introduced by Lampel and Meyer (2008)—provided insights into the nature and the social formulation of new time-oriented geographies of production in knowledge-based as well as creative industries. The concept of field-configuring events is an approach, mainly in management and organisation studies (e.g., Aspers & Asaf, 2011; Gross & Zilber, 2020; Lampel & Meyer, 2008; Moeran & Strandgaard Pedersen, 2011; Schüßler et al., 2015), and has attracted recent attention in studies within economic geography (e.g., Lange, Power, & Suwala, 2014; Scott, 1999). So far, field configuring events have not been integrated into entrepreneurial ecosystem concepts.

4.2 | Process perspectives in entrepreneurial ecosystems as a bridge for grasping multi-local and situational dynamics

From our perspective, the literature on entrepreneurial ecosystems may benefit from engaging more with these conceptual debates, because field configuring events focus on organising social proximity and encountering over time and geographical space (Glynn, 2008, Lampe & Meyer, 2008, Schüßler, Rilling, & Wittneben, 2013; Schüßler et al., 2015). In doing so, social interactions are organised according to time and cyclical market processes—for example, for different stages in an entrepreneurial biography. In doing so, these interactions are critical for diverse social architecture building, for creating and driving economic processes, and for providing cornerstones for temporal spaces.

Accordingly, the field configuring event approach pays attention to how and why spatial thinking needs to be better incorporated in different temporal scales alongside a traditional focus on rather stable and rigid biographical entrepreneurial patterns (Schüßler et al., 2015). As a heuristic concept, the field configuring event approach attempts to theorise and emphasise dynamic phases and aspects of emerging and declining fields of economic, and thus, entrepreneurial activities over time. It eludes the mechanisms of time that structure, maintain, and configure the appearance of new products, industrial standards, and knowledge categories. These are embedded in institutional, organisational, and professional fields (Meyer, Gaba, & Colwell, 2005; Sydow, Lindkvist, & Defillippi, 2004) that again create a link to the institutional environment for entrepreneurship addressed in entrepreneurial ecosystems.

This line of thinking thereby suggests a fruitful bridge to dynamics in microspaces introduced above. Events as temporary social gatherings (like trade shows, technological contests, tournaments etc.) assemble people and communities with diverse backgrounds and from multiple different localities in one space at a particular time to reveal products, create and foster social networks, engage in valuation processes and joint sense making, or to access otherwise distant sources and resources for their entrepreneurial endeavours (Lampel & Meyer, 2008, pp. 1025–1026). Microspaces thereby often provide the spatial context for these events and as such function as gates to spatially, functionally, and institutionally extensions of local entrepreneurial ecosystems. Events and the formation of microspaces that are stressed in this paper rest upon six characteristics (Lampel & Meyer, 2008, p. 1027):

1. pooling of diverse actors in one place,
2. bounded temporality (from hours to days),
3. spontaneous opportunities for direct social interaction, symbolic (dramaturgical, ceremonial, performative) constituent parts,
4. incidents for information exchange and collective sense making, and
5. reservoirs for social resources for manifold utilisations.

The question remains, to what extent temporal events serve as an explanatory sub-category for the procedural character and the situatedness of ecosystem components: If we are approaching ecosystems as a spatio-temporal field of condensed opportunity structures for entrepreneurs at different life-stages and with different interests, it becomes clear that ecosystems contain opportunities as professional events that may be arranged in an almost continual circuit in particular industries with shifting and varying connections to space and time. The spatial and economic context as well as timing and repetition of social events (see e.g., Power & Jansson, 2008) mean that in various local events, these encounters are far from a temporary exception and much more regular pit stops on well-travelled multi-local routes. This would entail that local meetups, boot-camps, pitches, and conferences, although being local or regional events taking place in microspaces, have lasting consequences for the translocal organisation of an ecosystem and the entrepreneurs that make up those industries.

This has implications for the categorial understanding of social relations, hierarchies, and functionalities within entrepreneurial ecosystems. Being local communities, which offer access to users at concrete places (such as microspaces), these timely restricted social events allow for intense face-to-face relationships. Cyclical processes of events in ecosystems are not only regular industrial meeting points, but also local platforms and channels for communication and broadcasting different types of messages, brands, or movements of upcoming or more mature entrepreneurs as well as mavericks. Together with their potential clients these entrepreneurial actors co-create multi-local prosumer notions as forms of social-interactions and as key drivers for dynamic ecosystems. Due to these actor constellations, ecosystems thereby continuously cross territorial boundaries (Winter, 2012). Still, particular localities in and of ecosystems play a vital role for the success thereof as, for example, events' communicative aspects depend on localised rituals, habits, and conventions with the subsequent city's status and its reputation. Place brands and narratives are increasingly sought after by events, which understand that there is an important positive relationship between events and places framing the symbolic value of ecosystems (Jansson & Power, 2010).

So far, many authors have focussed explicitly on spatialities of social events, gatherings, and get-together-formats in real physical time based on face-to-face-interaction (e.g., Skov & Meier, 2011). In doing so, they were strengthening temporary phenomena in general. Grabher (2004), among others, has drawn early attention to the fact that these events form an economy based on project work. The formation of a project, its enactment and dissolution was considered to configure the geography of an event (e.g., Grabher, 2002) based its location in shifting settings where time and process flows construct the project's ecosystem beyond an administrative local and regional bounded space.

The analytical focus has, therefore, been on the dimensions of social encounters of work and communication at specific locations in the (mostly urban) neighbourhood that is still the heuristic focus of many ecosystem researchers. Only recently, Lange and Bürkner (2018) and Dittrich, Eriksén, and Wessels (2014) have expanded these face-to-face-perspectives by typical forms of multiple superimpositions of these networks. In doing so, rather situational and ambivalent configurations characterise the very nature of ecosystems due to its variability of local *and* virtual-digital relationships (Autio, Nambisan, Thomas, & Wright, 2018). In turn, this dual relationality enables actors to take benefits from manifold, scalable networking opportunities and cooperations that form the social and territorial field of ecosystems. Many of them search for these possibilities in a focused manner—across the relational space between the local ecosystem and the geographically distant ecosystems.

Summing up, we argue that recent contributions on the procedural nature of knowledge generation (“events”) and on entrepreneurial processes (“configuration”) may create a communicative bridge between entrepreneurial ecosystems' perspectives and insights stemming, for example, from management and innovation studies. Temporary clusters and field configuring events, for instance, provide temporary social settings for creating, fostering, and maintaining relationships between various actors, eventually forming a community that comprises an (eco)system of multi-local institutional, entrepreneurial, and corporate contexts. Framing entrepreneurship as a sequence of entrepreneurial events (Spilling, 1996) succeeding organisational and spatial boundaries of firms and institutions may provide a fruitful nexus for this kind of conceptual link to multi-scalar time-space processes.

5 | CONCLUSION

Our paper offers a conceptual proposal for enriching entrepreneurial ecosystem debates with time-spatial dynamics, both within and across territorial constraints in order to contribute to a spatio-temporal refined understanding of current entrepreneurial ecosystem thinking. Rather than incrementally

broadening the concept of entrepreneurial ecosystems, we demonstrate, how the concept may provide conceptual bridges across disciplines. More specifically, we shed light on how dynamic spatial as well as temporal dimensions may address the procedural aspects of multi-local (rather than regional) entrepreneurship.

Thus, we first address a shortcoming in recent contributions that perceive entrepreneurial ecosystems as containers (fixed territories, may it be administrative geographical boundaries such as, city districts, cities or local communities, e.g., Budge, 2019; Fiorentino, 2019) rather than flexible and volatile spatial configurations that co-evolve with entrepreneurial ecosystems. Such a limitation in terms of spatial boundaries neglects a procedural understanding of entrepreneurship as well as the dynamic multi-local nature of entrepreneurial networks and activities. Based on our contribution outlined here, we argue for a heuristic perspective that benefits from creating conceptual bridges to scholarly debates on the role of spatial and temporal structures of entrepreneurial ventures (Schmid & Smith, 2020). In doing so, we are seeking to open entrepreneurial ecosystems' perspectives rather than considering ecosystems as more or less closed territorialised concept. Based on two key empirical as well as conceptual findings (a growing number of Open Creative Labs, on the one hand, and spatially flexible forms of temporal encounters in start-up networks, on the other hand), we have shed light on the role of liminal spaces for entrepreneurship, demonstrating that these spaces play a vital role in shaping, forming, and bridging various creative and potentially entrepreneurial processes. In practical applications, Open Creative Labs are addressed as relevant elements of a functioning and vital entrepreneurial ecosystem, but theoretical conceptualisations are not yet able to integrate these informal, fluid, and highly situative spaces with robust conceptual aspirations.

A second bridge that entrepreneurial ecosystems may explore relates to positioning entrepreneurship centre stage in the debates on spatio-temporal developments. Rather than focusing on a particular bounded region, such a perspective may focus on how entrepreneurial forms, networks, relationships, and respective environments evolve over time and space. Liminal spaces such as "microspaces" within and across administrative regions thus become fruitful starting ramps, temporary stations, or interim destinations for entrepreneurship as well as venues for the temporal structuring of multi-local entrepreneurial ventures. While this is a key component for a specific early career life span, they are hardly able to provide all elements for describing and formulating an entire entrepreneurial career nor the biographical processes that go along with that within the geography of a given entrepreneurial ecosystem. Knitting closer together the role of spatiality and spatio-temporality for conceptualising entrepreneurial ecosystems, the role of processes for entrepreneurial opportunities in different stages as well as in various volatile spatio-temporal contexts has to be highlighted as a general process perspective.

So far, existing conceptual elements in entrepreneurial ecosystems knowledge body root their argument on seemingly stable, fixed, and given communities (Motoyama & Watkins, 2014; Sussan & Acs, 2017). When stressing the process perspectives, we shed light on different social and spatial contexts in different processual cycles and life stages of budding, upcoming, evolving, and more mature entrepreneurs. Following this line of thinking, rather different and changing actors and actor constellations, for example, as networks and communities, are relevant in different life spans of an entrepreneurial process than permanent and given settings. Thus, a process and procedural understanding of entrepreneurship over time and space would address entrepreneurial opportunities not within a given and geographically fixed territory, but as shifting and flexible processes with demands that change over time and space.

Taking the process perspective further, the plea for process-based research (Schmid & Smith, 2020) transferred on entrepreneurial ecosystem thinking would honour associated multi-local learning processes and temporary experiments as essential prerequisites for entrepreneurial ventures to mature over time and space. Further research could shed light, for example, on the question where and how

budding entrepreneurs acquire new skills, networks, and competencies to develop their entrepreneurial projects at all. Exploring dynamic spatial as well as temporal perspectives in and for entrepreneurial ecosystems may hence provide a departing point for regarding ecosystems more socio-spatially flexible when it comes to make use of the concept as a bridging concept that flexibly ties in with interdisciplinary discourses on entrepreneurial processes in and across regional confines.

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REFERENCES

- Ács, Z. J., Autio, E., & Szerb, L. (2014). National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, *43*(3), 476–494. <https://doi.org/10.1016/j.respol.2013.08.016>
- Aldrich, H. E. (2014). *The democratization of entrepreneurship? Hackers, makerspaces, and crowdfunding*. Paper presented at the Annual Meeting of the Academy of Management. Philadelphia, PA, USA
- Aldrich, H. E., & Yang, T. (2014). How do entrepreneurs know what to do? Learning and organizing in new ventures. *Journal of Evolutionary Economics*, *24*(1), 59–82. <https://doi.org/10.1007/s00191-013-0320-x>
- Aspers, P., & Asaf, D. (2011). Trade shows and the creation of market and industry. *The Sociological Review*, *59*, 758–778. <https://doi.org/10.1111/j.1467-954X.2011.02031.x>
- Auschra, C., Schmidt, T., & Sydow, J. (2019). Entrepreneurial ecosystems as fields: Integrating meso-level institutional theory. *Zeitschrift für Wirtschaftsgeographie*, *63*(2–4), 64–78. <https://doi.org/10.1515/zfw-2018-0016>
- Autio, E., Nambisan, S., Thomas, L. D., & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, *12*(1), 72–95. <https://doi.org/10.1002/sej.1266>
- Baggio, J. A., Brown, K., & Hellebrandt, D. (2015). Boundary object or bridging concept? A citation network analysis of resilience. *Ecology and Society*, *20*(2), 1–12. <https://doi.org/10.5751/ES-07484-200202>
- Bakker, R. M., DeFillippi, R. J., Schwab, A., & Sydow, J. (2016). Temporary organizing: Promises, processes, problems. *Organization Studies*, *37*(12), 1703–1719. <https://doi.org/10.1177/0170840616655982>
- Bathelt, H. (2006). Geographies of production: Growth regimes in spatial perspective 3—Toward a relational view of economic action and policy. *Progress in Human Geography*, *30*(2), 223–236. <https://doi.org/10.1191/0309132506ph603pr>
- Bathelt, H., Malmberg, A., & Maskell, P. (2004). Clusters and knowledge: Local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography*, *28*(1), 31–56. <https://doi.org/10.1191/0309132504ph4690a>
- Benton, C., Mullins, L., Sheley, K., & Dempsey, T. (2013). Makerspaces. Supporting an entrepreneurial system. Lansing: City of East Lansing & East Lansing Public Library, MSU EDA University Center for Regional Economic Innovation (REI). Michigan State University, USA.
- Beyes, T., & Steyaert, C. (2011). The ontological politics of artistic interventions: Implications for performing action research. *Action Research*, *9*(1), 100–115. <https://doi.org/10.1177/1476750310396944>
- Blagoev, B., Costas, J., & Kärreman, D. (2019, online first). “We are all herd animals”: Community and organizational-ity in coworking spaces. *Organization*, *26*(6), 894–916. <https://doi.org/10.1177/1350508418821008>
- Bliemel, M., Flores, R., De Klerk, S., & Miles, M. P. (2019). Accelerators as start-up infrastructure for entrepreneurial clusters. *Entrepreneurship & Regional Development*, *31*(1–2), 133–149. <https://doi.org/10.1080/08985626.2018.1537152>
- Boutillier, S., Capdevila, I., Dupont, L., & Morel, L. (2020). Collaborative spaces promoting creativity and innovation. *Journal of Innovation Economics & Management*, *31*(1), 1–9. <https://doi.org/10.3917/jie.031.0001>
- Brinks, V., & Ibert, O. (2015). Mushrooming entrepreneurship: The dynamic geography of enthusiast-driven innovation. *Geoforum*, *65*, 363–373. <https://doi.org/10.1016/j.geoforum.2015.01.007>
- Brondizio, E. S., O'Brien, K., Bai, X., Biermann, F., Steffen, W., Berkhout, F., ... Chen, C.-T.-A. (2016). Reconceptualizing the Anthropocene: A call for collaboration. *Global Environmental Change*, *39*, 318–327. <https://doi.org/10.1016/j.gloenvcha.2016.02.006>
- Brown, R., & Mason, C. (2017). Looking inside the spiky bits: A critical review and conceptualisation of entrepreneurial ecosystems. *Small Business Economics*, *49*(1), 11–30. <https://doi.org/10.1007/s11187-017-9865-7>

- Budge, K. (2019). The ecosystem of a makerspace: Human, material and place-based interrelationships. *Journal of Design, Business & Society*, 5(1), 77–94. https://doi.org/10.1386/db.5.1.77_1
- Capdevila, I. (2013). Knowledge dynamics in localized communities: Coworking spaces as microclusters. Retrieved from <https://ssrn.com/abstract=2414121>
- Capdevila, I. (2015). Coworking spaces and the localized dynamics of innovation in Barcelona. *International Journal of Innovation Management*, 19(3), 1–25. <https://doi.org/10.1142/S1363919615400046>
- Cohen, B. (2006). Sustainable valley entrepreneurial ecosystems. *Business Strategy and the Environment*, 15(1), 1–14. <https://doi.org/10.1002/bse.428>
- Cooke, P., & Lazzeretti, L. (Eds.). (2008). *Creative cities, cultural clusters and local economic development*. Cheltenham, England: Edward Elgar.
- Cope, J. (2005). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 29(4), 373–397. <https://doi.org/10.1111/j.1540-6520.2005.00090.x>
- Coulson, S. (2012). Collaborating in a competitive world: Musicians' working lives and understandings of entrepreneurship. *Work, Employment & Society*, 26(2), 246–261. <https://doi.org/10.1177/0950017011432919>
- Crevoisier, O. (2014). Beyond territorial innovation models: The pertinence of the territorial approach. *Regional Studies*, 43(3), 551–561. <https://doi.org/10.1080/00343404.2011.602629>
- de Bruin, A., Shaw, E., & Lewis, K. V. (2017). The collaborative dynamic in social entrepreneurship. *Entrepreneurship & Regional Development*, 29(7–8), 575–585. <https://doi.org/10.1080/08985626.2017.1328902>
- Deppisch, S., & Hasibovic, S. (2013). Social-ecological resilience thinking as a bridging concept in transdisciplinary research on climate-change adaptation. *Natural Hazards*, 67(1), 117–127. <https://doi.org/10.1007/s11069-011-9821-9>
- Dittrich, Y., Eriksén, S., & Wessels, B. (2014). Learning through situated innovation. Why the specific is crucial for participatory design research. *Scandinavian Journal of Information Systems*, 26(1), 29–56.
- Engel, Y., Kaandorp, M., & Elfring, T. (2017). Toward a dynamic process model of entrepreneurial networking under uncertainty. *Journal of Business Venturing*, 32(1), 35–51. <https://doi.org/10.1016/j.jbusvent.2016.10.001>
- Ettlinger, N. (2003). Cultural economic geography and a relational and microspace approach to trust, rationalities, networks, and change in collaborative workplaces. *Journal of Economic Geography*, 3(2), 145–171.
- European Commission. (Ed.). (2019). European Startup Monitor 2019/2020. Retrieved from http://www.europeanstartupmonitor2019.eu/EuropeanStartupMonitor2019_2020_21_02_2020-1.pdf
- Fabri, J., & Charue-Duboc, F. (2013). The role of physical space in collaborative workplaces hosting entrepreneurs: The case of the “Beehive” in Paris. In F.-X. de Vaujany & N. Mitev (Eds.), *Materiality and space: Organizations, artefacts and practices* (pp. 117–134). London, UK: Palgrave Macmillan UK.
- Faulconbridge, J. R. (2006). Stretching tacit knowledge beyond a local fix? Global spaces of learning in advertising professional service firms. *Journal of Economic Geography*, 6(4), 517–540. <https://doi.org/10.1093/jeg/lbi023>
- Feldman, M. P. (2001). The entrepreneurial event revisited: Firm formation in a regional context. *Industrial and Corporate Change*, 10(4), 861–891. <https://doi.org/10.1093/icc/10.4.861>
- Fiorentino, S. (2018). Re-making urban economic geography. Start-ups, entrepreneurial support and the makers movement: A critical assessment of policy mobility in Rome. *Geoforum*, 93, 116–119. <https://doi.org/10.1016/j.geoforum.2018.05.016>
- Fiorentino, S. (2019). The Maker Faire of Rome as a window of observation on the new perspectives for local economic development and the new urban entrepreneurial ecosystems. *Local Economy*, 34(4), 364–381. <https://doi.org/10.1177/0269094219854999>
- Fleischmann, K., Hielscher, S., & Merritt, T. (2016). Making things in Fab Labs: A case study on sustainability and co-creation. *Digital Creativity*, 27(2), 113–131. <https://doi.org/10.1080/14626268.2015.1135809>
- Florida, R., & King, K. (2016). Rise of the urban startup neighbourhood. Working Paper Series, Martin Prosperity Research, June 2016 REF. 2016-MPIWP-003.
- Førde, A. (2019). Enhancing urban encounters: The transformative powers of creative integration initiative. *Urban Planning*, 4(1), 44–52. <https://doi.org/10.17645/up.v4i1.1713>
- Friedman, G. (2014). Workers without employers: Shadow corporations and the rise of the gig economy. *Review of Keynesian Economics*, 2(2), 171–188. <https://doi.org/10.4337/roke.2014.02.03>
- García-Rodríguez, F. J., Gil-Soto, E., Ruiz-Rosa, I., & Gutiérrez-Taño, D. (2017). Entrepreneurial process in peripheral regions: The role of motivation and culture. *European Planning Studies*, 25(11), 2037–2056. <https://doi.org/10.1080/09654313.2016.1262827>

- Gertner, D., & Mack, E. (2017). The Entrepreneurial orientation (EO) of incubators, accelerators, and co-working spaces. *International Journal of Regional Development*, 4(2), 1–25. <https://doi.org/10.5296/ijrd.v4i2.10210>
- Glynn, M. A. (2008). Configuring the field of play: How hosting the Olympic Games impacts civic community. *Journal of Management Studies*, 45(6), 1117–1146. <https://doi.org/10.1111/j.1467-6486.2008.00785.x>
- Grabher, G. (2002). The project ecology of advertising: Tasks, talents and teams. *Regional Studies*, 36(3), 245–262. <https://doi.org/10.1080/00343400220122052>
- Grabher, G. (2004). Learning in projects, remembering in networks?: Communitality, sociality, and connectivity in project ecologies. *European Urban and Regional Studies*, 11(2), 103–123. <https://doi.org/10.1177/0969776404041417>
- Gross, T., & Zilber, T. B. (2020). Power dynamics in field-level events: A narrative approach. *Organization Studies*, Online First, 1–22. <https://doi.org/10.1177/0170840620907197>
- Hägerstrand, T. (1967). *Innovation diffusion as a spatial process*, Chicago: University of Chicago Press.
- Hägerstrand, T. (1975). Space, time and human conditions. In A. Karlqvist, L. Lundqvist, & F. Snickars (Eds.), *Dynamic allocation of urban space* (pp. 3–14). Lexington, MA: Lexington Books.
- Hallen, B. L., & Eisenhardt, K. M. (2012). Catalizing strategies and efficient tie formation: How entrepreneurial firms obtain investment ties. *The Academy of Management Journal*, 55(1), 35–70. <https://doi.org/10.5465/amj.2009.0620>
- Hochberg, Y. V. (2016). Accelerating entrepreneurs and ecosystems: The seed accelerator model. *Innovation Policy and the Economy*, 16(1), 25–51. <https://doi.org/10.1086/684985>
- Ibert, O. (2010). Relational distance: Sociocultural and time—Spatial tensions in innovation practices. *Environment and Planning A*, 42(1), 187–204. <https://doi.org/10.1068/a4247>
- Ibert, O., Hautala, J., & Jauhiainen, J. S. (2015). From cluster to process: New economic geographic perspectives on practices of knowledge creation. *Geoforum*, 65, 323–327. <https://doi.org/10.1016/j.geoforum.2015.06.023>
- Ibert, O., Kuebart, A., & Brewig, S. (2018). Handbook on the Geographies of Innovation. Shearmur R, Carrincazeaux C and Doloreux D (Eds), *Zeitschrift für Wirtschaftsgeographie*, 62(1), 82–85. <https://doi.org/10.1515/zfw-2017-0027>
- Jamal, A. C. (2018). Coworking spaces in mid-sized cities: A partner in downtown economic development. *Environment and Planning A: Economy and Space*, 50(4), 773–788. <https://doi.org/10.1177/0308518X18760857>
- Jansson, J., & Power, D. (2010). Fashioning a global city: Global city brand channels in the fashion and design industries. *Regional Studies*, 44(7), 889–904. <https://doi.org/10.1080/00343400903401584>
- Knoben, J., & Oerlemans, L. A. G. (2006). Proximity and inter-organizational collaboration: A literature review. *International Journal of Management Reviews*, 8(2), 71–89. <https://doi.org/10.1111/j.1468-2370.2006.00121.x>
- Kollmann, T., & Kuckertz, A. (2006). Venture Archetypes and the entrepreneurial event: Cross-cultural empirical evidence. *Journal of Enterprising Culture*, 14(1), 27–48. <https://doi.org/10.1142/s0218495806000039>
- Kováč, I., & Kučerová, E. (2009). The social context of project proliferation—The rise of a project class. *Journal of Environmental Policy & Planning*, 11(3), 203–221. <https://doi.org/10.1080/15239080903033804>
- Kruker, V. M., Schier, M., & von Streit, A. (2002). Geography and gendered labour markets. *GeoJournal*, 56(4), 243–251. <https://doi.org/10.1023/A:1025920109255>
- Kuckertz, A. (2019). Let's take the entrepreneurial ecosystem metaphor seriously!. *Journal of Business Venturing Insights*, 11(online, first), 1–7. <https://doi.org/10.1016/j.jbvi.2019.e00124>
- Kuebart, A., & Ibert, O. (2019). Beyond territorial conceptions of entrepreneurial ecosystems: The dynamic spatiality of knowledge brokering in seed accelerators. *Zeitschrift für Wirtschaftsgeographie*, 63(2–4), 118–133. <https://doi.org/10.1515/zfw-2018-0012>
- Lampel, J., & Meyer, A. D. (2008). Field-Configuring events as structuring mechanisms: How conferences, ceremonies, and trade shows constitute new technologies, industries, and markets. *Journal of Management Studies*, 45(6), 1025–1035. <https://doi.org/10.1111/j.1467-6486.2008.00787.x>
- Lange, B. (2005). Socio-spatial strategies of Culturepreneurs. The example of Berlin and its new professional scenes. *Zeitschrift für Wirtschaftsgeographie*, 49(2), 81–98.
- Lange, B., & Bürkner, H.-J. (2018). Flexible value creation: Conceptual prerequisites and empirical explorations in open workshops. *Geoforum*, 88, 96–104. <https://doi.org/10.1016/j.geoforum.2017.11.020>
- Lange, B., & Büttner, K. (2010). Spatialization patterns of translocal knowledge networks: Conceptual understandings and empirical evidences of Erlangen and Frankfurt/Oder. *European Planning Studies*, 18(6), 989–1018. <https://doi.org/10.1080/09654311003701548>
- Lange, B., Power, D., & Suwala, L. (2014). Geographies of field-configuring events. *Zeitschrift für Wirtschaftsgeographie*, 58(4), 187–201. <https://doi.org/10.1515/zfw.2014.0013>

- Lange, B., & Schüßler, E. (2018). Unpacking the middleground of creative cities: Spatiotemporal dynamics in the configuration of the Berlin design field. *Regional Studies*, 52(2018), 1548–1558. <https://doi.org/10.1080/00343404.2017.1413239>
- Lowe, N. J., & Feldman, M. P. (2017). Institutional life within an entrepreneurial region. *Geography Compass*, 11(3), 1–10. <https://doi.org/10.1111/gec3.12306>
- Lundin, R. A., & Söderholm, A. (1995). A theory of the temporary organization. *Scandinavian Journal of Management*, 11(4), 437–455. [https://doi.org/10.1016/0956-5221\(95\)00036-U](https://doi.org/10.1016/0956-5221(95)00036-U)
- Mack, E., & Mayer, H. (2016). The evolutionary dynamics of entrepreneurial ecosystems. *Urban Studies*, 53(10), 2118–2133. <https://doi.org/10.1177/0042098015586547>
- Malecki, E. J. (2018). Entrepreneurship and entrepreneurial ecosystems. *Geography Compass*, 12, 1–21. <https://doi.org/10.1111/gec3.12359>
- Maskell, P., Bathelt, H., & Malmberg, A. (2006). Building global knowledge pipelines: The role of temporary clusters. *European Planning Studies*, 14(8), 997–1013. <https://doi.org/10.1080/09654310600852332>
- Mason, C., & Brown, R. (2014). Entrepreneurial ecosystems and growth-oriented entrepreneurship. *Final Report to OECD, Paris*, 30(1), 77–102.
- McRobbie, A. (2015). *Be creative: Making a living in the new culture industries*. London, UK: Polity Press.
- Merkel, J. (2015). Coworking in the city. *Ephemera—Theory & Politics in Organizations*, 15(1), 121–139.
- Meyer, A. D., Gaba, V., & Colwell, K. A. (2005). Organizing far from equilibrium: Nonlinear change in organizational fields. *Organization Science*, 16(5), 456–473. <https://doi.org/10.1287/orsc.1050.0135>
- Moeran, B., & Strandgaard Pedersen, J. (Eds.). (2011). *Negotiating values in the creative industries: Fairs, festivals and competitive events*. Cambridge, UK: Cambridge University Press. Retrieved from <https://www.cambridge.org/core/books/negotiating-values-in-the-creative-industries/65CF4B31FB8423DBBAC631E518587F9E>.
- Montessori, N. M. (2016). A theoretical and methodological approach to social entrepreneurship as world-making and emancipation: Social change as a projection in space and time. *Entrepreneurship & Regional Development*, 28(7–8), 536–562. <https://doi.org/10.1080/08985626.2016.1221229>
- Morgan, J., & Olsen, W. (2008). Defining objectivity in realist terms. *Journal of Critical Realism*, 7(1), 107–132. <https://doi.org/10.1558/jocr.v7i1.107>
- Motoyama, Y., & Watkins, K. K. (2014). Examining the connections within the startup ecosystem: A case study of St. Louis. Kansas City, Missouri. *Entrepreneurship Research Journal*, 7(1), 1–32. <https://doi.org/10.2139/ssrn.2498226>
- Moulaert, F., & Sekia, F. (2003). Territorial innovation models: A critical survey. *Regional Studies*, 37(3), 289–302. <https://doi.org/10.1080/0034340032000065442>
- Murcia, C., Aronson, J., Kattan, G.-H., Moreno-Mateos, D., Dixon, K., & Simberloff, D. (2014). A critique of the “novel ecosystem” concept. *Trends in Ecology & Evolution*, 29(10), 548–553. <https://doi.org/10.1016/j.tree.2014.07.006>
- Neck, H. M., Meyer, G. D., Cohen, B., & Corbett, A. C. (2004). An entrepreneurial system view of new venture creation. *Journal of Small Business Management*, 42(2), 190–208. <https://doi.org/10.1111/j.1540-627X.2004.00105.x>
- OECD. (2014). Stimulating high-growth firms and local entrepreneurial ecosystems. In OECD (Ed.), *Job creation and local economic development* (pp. 123–139). Paris, France: OECD Publishing.
- Oswick, C., & Robertson, M. (2009). Boundary objects reconsidered: From bridges and anchors to barricades and mazes. *Journal of Change Management*, 9(2), 179–193. <https://doi.org/10.1080/14697010902879137>
- Orlikowski, W. J., & Yates, J. A. (2002). It's about time: Temporal structuring in organizations. *Organization Science*, 13(6), 684–700.
- Porter, M. E. (1990). The competitive advantage of nations. *Harvard Business Review*, 68(2), 73–93.
- Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 15(15), 15–34. <https://doi.org/10.1177/089124240001400105>
- Power, D., & Jansson, J. (2008). Cyclical clusters in global circuits: Overlapping spaces in furniture trade fairs. *Economic Geography*, 84(4), 423–448. <https://doi.org/10.1111/j.1944-8287.2008.00003.x>
- Pratt, A. (2009). The challenge of governance in the creative and cultural industries. In B. Lange, A. Kalandides, B. Stöber, & I. Wellmann (Eds.), *Governance der Kreativwirtschaft* (pp. 271–288). Bielefeld, Germany: Transcript.
- Rae, D. (2006). Entrepreneurial learning: A conceptual framework for technology-based enterprise. *Technology Analysis & Strategic Management*, 18(1), 39–56.
- Roma, A. D., Minenna, V., & Scarcelli, A. (2017). Fab labs. New hubs for socialization and innovation. *The Design Journal*, 20(Suppl. 1), 3152–3161. <https://doi.org/10.1080/14606925.2017.1352821>

- Scaillerez, A., & Tremblay, D.-G. (2018). Terceros lugares como espacios de coworking, fab labs y living labs. Conceptos clave y un marco referencial. *Revista del Centro de Estudios de Sociología del trabajo*, 10, 39–63.
- Schäfer, S., & Mayer, H. (2019). Entrepreneurial ecosystems: Founding figures and research frontiers in economic geography. *Zeitschrift für Wirtschaftsgeographie*, 63(2–4), 55–63. <https://doi.org/10.1515/zfw-2019-0008>
- Schmid, B., & Smith, T. S. (2020). Social transformation and postcapitalist possibility: Emerging dialogues between practice theory and diverse economies. *Progress in Human Geography*, Online First, 1–23. <https://doi.org/10.1177/0309132520905642>
- Schmidt, S. (2019). In the making: Open Creative Labs as an emerging topic in economic geography? *Geography Compass*, 13(9), 1–16. <https://doi.org/10.1111/gec3.12463>
- Schmidt, S., & Brinks, V. (2017). Open creative labs: Spatial settings at the intersection of communities and organizations. *Creativity and Innovation Management*, 26(3), 291–299. <https://doi.org/10.1111/caim.12220>
- Schuldt, N., & Bathelt, H. (2009). Reflexive Zeit- und Raumkonstruktionen und die Rolle des Global Buzz auf Messeveranstaltungen. *Zeitschrift für Wirtschaftsgeographie*, 53(1–2), 235–248. <https://doi.org/10.1515/zfw.2009.0017>
- Schüßler, E., Grabher, G., & Müller-Seitz, G. (2015). Field-configuring events: Arenas for innovation and learning? *Industry and Innovation*, 22(3), 165–172. <https://doi.org/10.1080/13662716.2015.1038098>
- Schüßler, E., Rülting, C., & Wittneben, B. (2013). On melting summits: The limitations of field-configuring events as catalysts of change in transnational climate policy. *Academy of Management Journal*, 57(1), 140–171. <https://doi.org/10.5465/amj.2011.0812>
- Scott, A. J. (1999). The cultural economy: Geography and the creative field. *Media culture & society*, 6, 807–818.
- Scotlandcando. (2018). Scottish entrepreneurial ecosystem guide. Retrieved from <https://interface-online.org.uk/sites/default/files/Scottish-Entrepreneurial-Ecosystem-Guide-May-2018.pdf>
- Shah, S. K., & Tripsas, M. (2007). The accidental entrepreneur: The emergent and collective process of user entrepreneurship. *Strategic Entrepreneurship Journal*, 1(1–2), 123–140. <https://doi.org/10.1002/sej.15>
- Shapiro, A., & Sokol, L. (1982). The social dimensions of entrepreneurship. *Encyclopedia of Entrepreneurship*, 72–90. <https://ssrn.com/abstract=1497759>
- Skov, L. (2006). The role of trade fairs in the global fashion business. *Current Sociology*, 54(5), 764–783. <https://doi.org/10.1177/0011392106066815>
- Skov, L., & Meier, J.. (2011). Configuring sustainability at fashion week. In B. Moeran & J. Strandgaard Pedersen (Hrsg.), *Negotiating values in the creative industries: Fairs, festivals and competitive events* (pp. 270–293). Cambridge, UK: Cambridge University Press.
- Spigel, B. (2017). The relational organization of entrepreneurial ecosystems. *Entrepreneurship Theory and Practice*, 41(1), 49–72. <https://doi.org/10.1111/etap.12167>
- Spigel, B., Kitigawa, F., Mason, C., & Izushi, H. (2020). A manifesto for researching entrepreneurial ecosystems. Retrieved from <https://www.jlgec.org.uk/en/wp-content/uploads/2020/03/Manifesto-paper-English-website-110320.pdf>
- Spilling, O. R. (1996). The entrepreneurial system: On entrepreneurship in the context of a mega-event. *Journal of Business Research*, 36(1), 91–103. [https://doi.org/10.1016/0148-2963\(95\)00166-2](https://doi.org/10.1016/0148-2963(95)00166-2)
- Spinuzzi, C. (2012). Working alone together: Coworking as emergent collaborative activity. *Journal of Business and Technical Communication*, 26(4), 399–441. <https://doi.org/10.1177/1050651912444070>
- Stam, E. (2015). Entrepreneurial ecosystems and regional policy: A sympathetic critique. *European Planning Studies*, 23(9), 1759–1769. <https://doi.org/10.1080/09654313.2015.1061484>
- Star, S. L., & Griesemer, J. R. (1989). Institutional ecology, translations' and boundary objects: Amateurs and professionals in Berkeley's museum of vertebrate zoology, 1907–39. *Social Studies of Science*, 19(3), 387–420. <https://doi.org/10.1177/030631289019003001>
- Storper, M., & Venables, A. J. (2004). Buzz: Face-to-face contact and the urban economy. *Journal of Economic Geography*, 4(4), 351–370. <https://doi.org/10.1093/jnlecg/lbh027>
- Sussan, F., & Acs, Z. J. (2017). The digital entrepreneurial ecosystem. *Small Business Economy*, 49(1), 55–73. <https://doi.org/10.1007/s11187-017-9867-5>
- Sydow, J., Lindkvist, L., & DeFillippi, R. (2004). Project-based organizations, embeddedness and repositories of knowledge. *Organization Studies*, 25(9), 1475–1489. <https://doi.org/10.1177/0170840604048162>
- Taylor, S., & Spicer, A. (2007). Time for space: An interpretive review of research on organizational spaces. *International Journal of Management Reviews*, 9(4), 325–346.

- Törnqvist, G. (2004). Creativity in time and space. *Geografiska Annaler: Series B, Human Geography*, 86(4), 227–243. <https://doi.org/10.1111/j.0435-3684.2004.00165.x>
- Winter, C. (2012). How media prosumers contribute to social innovation in today's new networked music culture and economy. *International Journal of Music Business Research*, 1(2), 46–73.
- Wolf, P., & Troxler, P. (2016). Community-based business models: Insights from an emerging maker economy. *Interaction Design and Architecture(s) Journal*, 30, 75–94.
- Wolf-Powers, L., Doussard, M., Schrock, G., Heying, C., Eisenburger, M., & Marotta, S. (2017). The maker movement and urban economic development. *Journal of the American Planning Association*, 83(4), 365–376. <https://doi.org/10.1080/01944363.2017.1360787>

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