Transitional spaces – geographies of copresence and collaboration in Open Labs

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New Spaces and their effects for urban transitions

Micro-spaces of altered work and production have popped up worldwide in the context of urban, economic and societal transformation. Scholars have so far addressed them as Open Labs, FabLabs, Urban Laboratories and Coworking Spaces (Herrle et al., 2015; Wolfram and Frantzeskaki, 2016). They have also become recognized by a larger public. One indicator is that calls for the purposeful establishment of Open Labs in schools and other educational institutions have been made (Assaf, 2014).

In 2016, almost 500 Open Labs were counted in Germany (Lange et. al, 2016), ranging from bike kitchens, FabLabs, printing studios, and other open places engaged in prototyping, crafting and fixing artefacts. Due to an enormous increase of Open Labs by almost 50% over the last 2 years (ibid.), the necessity now arises to conceptualize these Labs in more detail.

In our understanding, Open Labs are an important part of the new scenery of open innovation. They comprise craft elements as diverse as highly innovative production technologies, such as prototyping technologies, 3D printing, screen printing, traditional crafts, bicycle repairing, and others. These phenomena have been considered sites of 'collaborative coworking' (Bender, 2013), 'alternative economies' (Lange, 2017) or 'experimental fabbing labs' (Fleischmann et al., 2016). They have in common that their internal structures and practices substantially differ from the routines of commercial production patterns.

In the past few years, the academic and policy-oriented debate has raised attention on these spaces for various reasons: While some scholars address them as topical niches in the context of sustainability and transformation (Liedtke et al., 2015; Liedtke et al., 2012; McCormick et al., 2013; Nevens et al., 2013), others have taken a closer look at their role as small breeding places of innovative practices within multi-level-governance and urban transition (Gavin et al., 2013; North and Longhurst, 2013; Schirmer, 2010; Seyfang and Haxeltine, 2012). Urban studies scholars have perceived these micro grassroots spaces as a counter movement against the backdrop of financial and austerity effects at the local level (Färber, 2014; Tonkiss, 2013; Vathakou, 2015). Others have started to shed light on collaborative practices within peer production networks (Hemetsberger and Reinhardt, 2009).

An additional strand of conceptualization emerged from studies on recent shifts in the organization of work, including actual work practices, in contemporary processes of economic transformation. A crucial role for the restructuring of how, when and where people work has been played by the technology-driven deregulation of labour markets (changes in labour markets mean more self-employment but also new job profiles due to internet and communication technologies; more freelance work) as well as by ICT-induced re-organization of work and workplaces (Kostakis and Bauwens, 2014; Smith et al., 2017).

Although many of these disciplinary approaches comprise very different scopes and topical interests, it is striking that a more comprehensive interdisciplinary conceptualization of the topic is still missing. Labelling prevails over systematic investigation, leaving the issue to metaphoric generalization, such as 'grassroots', 'niche', 'space', 'lab', or others. While these notions appear to indicate new urban nuclei of transformation and idiosyncratic social practices, very little information has been provided when it comes to the social configurations which these phenomena imply.

In spite of this void, it is striking that Open Labs have been intuitively approached as a key component of anticipated macro-scale transformations, e.g. those leading the way to the so-called 'green economy'. This has created the paradox that the economic practices and dimensions of Open Labs are on the one hand extremely underconceptualized, and on the other hand overrated and overestimated, especially regarding their potentials for wider economic change. Nevertheless, Open Labs have been detected as political option creators, mainly by policy makers and intermediaries who strive to take advantage of their implicit and explicit transformative power on neighboring systems. Such endeavors have been represented by recent policy initiatives and model projects funded by national ministries (WBGU, 2016). However, the very basic issue of the economic significance of the phenomena in question has hardly ever been addressed.

Presently there are only a few scholars such as Fleischmann et al. (2016) and Smith et al. (2017) who point to the transformative power of open labs for the fields of open innovation (Gassmann et al., 2010), or self-organized do-it-yourself practices and amateur-like craftsmanship (Jabareen, 2014). These scholars have expressed their expectation that the substitution of products and the prolongation of product life cycles occurring within various types of Open Labs may have positive effects, not only on the valorization of local resources but also on energy sufficiency.

These very selective economic aspects, notwithstanding the interesting effects of specific socialities on value creation and altered 'modes of production', have grossly been missed. Currently there is little systematic academic knowledge available regarding the potential of economic transformation implied by small socio-economic configurations, e.g. as arising from the idiosyncratic social relations they imply or the implementation of experimental work relations which transcend traditional logics of sheer profit maximizing (Lange, 2017). Therefore, Open Labs must be analytically approached from a refined socio-economic understanding of production, regional economies and the logic of value chain production.

Open labs and transition processes

My contribution focuses on socio-spatial contexts of the protagonists of open labs and the ways in which their practices take up positioning and location in urban contexts. In the course of multiple crises in the financial sector, food production, climate change, the crisis of political legitimacy, participation, and natural resource destructions, as well as useless consumption, many protagonists have started to install so-called open labs worldwide.

Open labs (e.g. screen printing spaces, bicycle labs, repair cafés, FabLabs, etc.) are becoming increasingly important and provide valuable impulses when hopes are placed on urban innovation processes (Lange et al., 2016): craftsmanship, repairing technologies, and DIY-attitudes. The original practice of open labs – transforming old goods to existing usable ones – predestined these as places of alternative consumption and production practices (Baier et al., 2016).

To date, these phenomena have entered public, academic and policy discourses at various levels. Federal ministries are aiming to support niche-phenomena such as open labs and open creative labs, as well as real laboratories. The German Advisory Council on Global Change (Wissenschaftlicher Beirat Globale

Umweltveränderungen (WBGU), 2016, p.26) in particular has stated that in so-called 'real-world laboratories', scientists and stakeholders can jointly acquire knowledge and solutions for the urban transformation by trying things out and experimenting.

Parallel to policy papers, such bottom-up phenomena are the focus of academic discourses and have been addressed on the one hand in the context of complex, multi-level theories (Coehnen et al., 2012). On the other hand, they are approached as 'grassroots innovation movements' (Smith, 2017) and as expressions of experimental urban transformations (Färber, 2014). Stimulated by so-called transition theory approaches (Geels and Schot, 2007) and in order to achieve transition and sustainability goals, further systems necessary for everyday life, e.g. mobility, housing or energy supply, have been addressed (Herrle et al., 2015, Herrle, 2013, Wolfram and Frantzeskaki, 2016).

Our line of thinking is informed by the invitation of Smith et al. (2010) to conceptually prepare 'transitional geographies' and to closer consider a spatial perspective in the debate of transition theories, aiming at bringing these insights into case studies and concrete expressions. Our results show that open labs can be discussed as a cohesive manifestation of transitional geographies, contributing to a more detailed view of horizontal networks of bottom-up phenomena in spatial contexts.

Conceptual research contributions in human and economic geography, as well as urban studies, have in recent years helped to recognize the spatial implications of transition processes with the help of so-called Science and Technology Studies (STS), also helping to connect them conceptually with a spatial perspective (Berndt and Böckler, 2009, Berndt and Glückler, 2006, Farias, 2011). In this way, the role of place and scale should be brought forward to enrich the analytical benefits of the multi-level perspective (MLP) (Bai et al., 2010, Davies, 2012, Schreuer et al, 2010, Seyfang and Haxeltine, 2012).

The focus of our research interest is on open labs and the question of how they can be scaled up out of their niche to become more and more effective on a broader regional scale. On the one hand, there is no systematic knowledge of the extent to which this type of bottom-up phenomenon can expand and scale up. In addition to that, there are huge societal and policy-based expectations around how these micro phenomena can play a fundamental supportive role regarding transitional processes. On the other hand, there is no empirical knowledge available about the necessary professionalization and expansion wishes of the protagonists of such 'social places of innovation' (WBGU, 2016), which cannot underline the relevance of the transitional theories to date, nor the great epistemologies of societal transitions as stated by the WBGU. Open labs will be tackled as a distinct type of social space in the following, that is in the centre of attention in the context of urban transitions and sustainability discussions (WBGU, 2016).

From an urban and economic viewpoint, a growing number of open labs have recently emerged as a research subject (Smith et al., 2017, Baier et al., 2016, Karvonen and van Heur, 2014, Schmidt et al., 2014, Smith et al., 2017). They are either aiming at identifying the structuring role of these 'social innovation places' (Gavin et al., 2013, Nevens et al., 2013, North and Longhurst, 2013), or better understanding self-organized transition processes on the way to a sustainable society (WBGU, 2016, Schneidewind, 2016).

Open labs are a type of transitional space where people can repair, modify, transform, or even produce goods that meet their daily needs (Ferdinand et al. 2016). The increase in the number of such practices (Chitekwe-Biti et al., 2014) generates great expectations among policy makers and ministries of the broad social impacts of such phenomena on value-added and material production processes (WBGU, 2016).

Research question and outline

With the help of spatial-theory enriched transition concepts, I propose an argumentatively expanded framework to present an empirical survey of actors in, and operators of, open labs on questions of upscaling, aiming at presenting their narratives and motifs for reasons of continuation, upscaling and diffusion in a generalizing and typologizing manner.

My contribution examines this research gap by asking two questions:

- How do stakeholders in bottom-up as well as social movements, in this case open labs, deal with the top-down regulation and control practices from a spatial and practice-relevant perspective?
- What is a spatial and praxeological perspective for explaining expectations, processes and practices of professionalization and scaling-up open labs?

Systematically, we cannot yet adequately understand how open labs can evolve from their niche to become more and more effective on a translocal and regional or even national scale. The question of socio-political relevance is becoming more and more pressing in urban, social and economic policy fields of expertise, when questions arise of how scalable bottom-up phenomena are. Further questions include how extensible their transitory effects can be anticipated in the context of post-growth economies (Paech, 2012) or alternative economic forms.

For this, there are still no plausible, empirical and socio-theoretically relevant analysis perspectives to observe that can describe and explain adequately processes of successful or failed upscaling, considering spatial dimensions.

In terms of research methodology, my contribution introduces two levels of observation and analysis into the discussion about upscaling of bottom-up phenomena. On the one hand, my contribution is conceptually based on transition theory and so-called 'transition geographies of open labs', in the sense of geographic scales and practical relations between scale (1) and professionalization processes (2) that are of prime importance.

On the other hand, we are examining empirically socio-spatial processes and practices of positioning, spatial appropriation, and self-location policies in encompassing spatial contexts within open labs, to analyze obstacles and paradoxical patterns regarding upscaling. Our objective is to understand, by means of conceptual extensions of transitional concepts and by empirical survey results at open labs, what types of self-described variants can be detected through actors and protagonists of open labs. This will contribute to the explanation of bottom-up phenomena and their scalability.

Social practices and the city

In the discourse on the future design of metropolitan areas, the focus is increasingly on forms of experimentation and creative knowledge generation in the modes of co-design and co-production (WBGU, 2016, p.159). In this context, social places such as Reallabore (Schneidewind and Scheck, 2013), Urban Transition Labs (Nevens et al., 2013) or Living Labs (Evans and Karvonen, 2014, Liedtke et al., 2015, Liedtkeet al., 2012) are aligned with the guiding principle of sustainability and designed together with local actors.

Such spaces, as well as the associated ideas of transition, represent a conceptual complement to the transition and multi-level perspectives. They focus intensively on the theories of social practices in governance processes. A discussion on possible interfaces as well as tensions between the transition

theories and theories of social practice has been presented in recent years (Grin et al., 2010, Shove and Walker, 2007, Smith and Seyfang, 2013). Socio-spatial relevant practices take into consideration concrete, everyday functions (for example, food, mobility, education, and repair activities) from a horizontal perspective and in a regime-wide way to illuminate them in their collective common, conventionalized and shared dimensions, as well as in their socially differentiated versions. Authors such as Geels (Geels, 2002), Smith and Voß (Smith et al., 2010) analyze how relevant practices emerge and are part of societal processes of normalization in the sense of their distribution, continuation, change or disappearance.

From the side of the practical theoretic approach, the transitional theories (for example, McMeekin and Southerton, 2012) criticize, among other things, the lack of conceptualization of the consumer side. There is no emphasis placed on the specifically innovative groups of consumers and their new social or cultural technologies, as well as no comprehensive knowledge of how these protagonists form, in an active and modifying manner, the further development and market implementation.

To date, this research field is decoupled and detached as opposed to spatial explanatory variables. Bottom-up phenomena indeed take place in a thematic manner and are analyzed in terms of governance regulation as well as transition theory, but are analyzed mostly without context in terms of space. In recent times, conceptual work has been presented, especially from a spatial and urban viewpoint, as a means to view social movements and bottom-up phenomena as urban appropriation processes (Färber, 2014, Iveson, 2013, Jabareen, 2014), as a resource for social innovations (Baier et al., 2016), as an expression of the search for sustainable mobility and production options by peer networks (Ferdinand et al., 2016), as the presupposition of sovereignty of local-regional sources of nutrition (Lee et al., 2010), or as local scenes where economically relevant value configurations can be observed (Bürkner and Lange, 2016).

Together with crises-induced local urban examples and the multiplicity of bottom-up phenomena, a discourse about current urban policy developments is being established. This discourse enriches and contextualizes the analysis of upscaling and transformation processes at the urban and spatial level, the most striking being investigations into initiatives of the so-called post-crisis city and low-budget urbanism (Färber, 2014).

To date, urban manifestations of economic crises and scarce communal resources have been present in many places (Bialski et al., 2015, Knieling and Othengrafen, 2016, Sbeih, 2014), mainly from southern European countries (Vaiou and Kalandides, 2016, Vathakou, 2015) or US cities (Peck, 2012). The discourse surrounding the ‘provisional city’ represents an attempt to develop a new perspective on the post-crisis city and on austerity urbanism (Mayer, 2012). Here, the potential of provisional interventions in specific spatial contexts is emphasized in contrast to conventional transition and development models (Lange, 2010).

Places, spaces, and districts, which have fallen out of the functional classical exploitation context, are subjected to revision with respect to new functional, spatial, and time-based models. Tonkiss (Tonkiss, 2013), for example, is trying to develop a concept that examines alternative value-added models through the production of their own premises. In her work, linear scaling and input-output models are rejected. She tries to locate the value added by small, often temporary and solitary initiatives in the further transformation of the city:

‘[They] can help set the terms for what happens later’ (ibid. p.318). The breaks and vacancies which have been created during numerous crises in urban development dynamics are considered, as they can be temporarily used by social initiatives and can be addressed as ‘experimental utopias’ (ibid. p.322) to the subject of everyday practice.

According to Färber (2014), the actors of these areas are moving between self-empowerment, protest and the fulfilment of neoliberal urban policies. In this field of tensions, Tonkiss identifies various ways of planning how to deal with this (Tonkiss, 2013, p.313): extreme cases are the supporting approaches in Berlin and Amsterdam, which contrast with the 'politics of abandonment' seen in the US and southern European cities – methods located at different ends of a matrix between support and autonomy.

I consider the perspective on negotiation with spaces and the specific competences of the open labs as analytically helpful, because various actions, positioning practices and design motifs can be analyzed in fragmented municipalities. These range from DIY, self-made to self-realization. The impacts of open labs and their upscaling expectations would thus be sought not only at the economic or material-relevant level, but also in the governance field of social and spatial innovation, helping cities adapt to new forms during crisis (Andres, 2013, Othengrafen et al., 2016). Therefore, the context of current urban policy developments is a central layer for the analysis of upscaling and transformation processes.

The epistemological level 'city', as well as 'place' and 'space', directly address open labs. To date, the transitional theories outlined here have not yet been oriented to the core focus of open labs and other niches, since they are more closely oriented to the large production paradigms (e.g. energy transition), although within these top down transitions 'micro activities' are needed. The political top-down paradigm remains in an unclear relationship with the bottom-up phenomena, their forms of impact and their distinct practice. Therefore, it is appropriate to address the perspective of the bottom-up actors and their local logics, and to more closely consider their place perspectives in the context of 'their' open labs.

Based on top-down assumptions, a great part of the public debate (WBGU, 2016) assigns open labs the opportunity to play an active role in socio-technical as well as economic change, and to achieve positive material effects (Ferdinand et al., 2016). From the bottom-up and social perspective of the movement, it has been shown in the transitional theories that have been put in place that governance processes have hardly been illuminated from a spatial-relevant perspective. Helpful positions have been presented by WBGU (WBGU, 2016) and Herrle, Fokdal and Ley (Herrle et al., 2015).

Data sample, methodological approach and form of interpretation

Based on an empirical survey of open labs in 2015, I focus on organizational and self-governance practices of the actors, aiming at reconstructing their manifestations within social, material and spatial references. For the online survey, a data sample of 'open labs' was created between April and June 2015 in the entire federal territory of Germany, comprising 453 addresses. As a basis for the structure of the data set, three factors were condensed from the definition approaches: openness, sharing of infrastructure and sharing of knowledge about material processing. 103 labs (response rate 23%) answered the 76 questions completely and representatively (Miles and Hubermann, 1994), thereby enabling a comprehensive description of the structures of open labs, their networks and processes (see also Lange et al., 2016). The data survey took place in a user-centred way, by one person being representative for one open workshop.

Places, spaces and social relations of open labs

The existing data on open labs clearly shows that although they hope to achieve a better future on a global scale, they act largely in their social networks on a local neighbourhood and city level (ibid.). For the near future, the open labs surveyed mainly want growth (41%) and professionalization (21%) of their own projects, as well as the dissemination of key purposes (22%). In contrast, only 8% of the respondents are

concerned that their labs should remain exactly the way they are. This manifests a motivation to professionalize themselves, to extend their own efficiency and to scale-up their own principles into other social, spatial and thematic spheres. This, nevertheless, would require locally-adapted implementation and professionalized strategies.

There are two dimensions in the statement, which can be subdivided as follows: On the one hand, specific local narratives are served by the protagonists of open labs, on the other hand, local coalitions are achieved. As a narrative, meaningful stories have influence on the way in which the environment is perceived, organising these perceptions and acting as a framework for the actors (Kohler-Riessman, 1996). These are established narratives, which are endowed with legitimacy. Coalitions are semantic expressions of social networking intentions on a horizontal level among peers, or to actors, places or institutions on a different professional scale. The following statements of local attributions can be identified from some of the questions raised in the survey:

The narrative 'processes and practices of compensation within the locale'
Protagonists address open labs as counter-horizons and as collective and social places, in opposition to an articulated distrust of everyday urban life. As an interviewee stated, a core motif is 'to create spaces' and 'to creatively make use of empty and abandoned space'. This gives opportunities 'not only to meet the wishes of the citizens for innovative uses for resident buildings and fallows, but also to strengthen the resilience of the municipality against the global. They are aiming at strengthening locally perceptible challenges of the next years and decades'.

In this case, spatial attributes are directly related to their own initiative practices: 'In a city where vacancy exists and its growth is to be feared, the support of new usage concepts would be a smart investment in the future' (response ID: 86).

In relation to the social transformation frames, a respondent refers to the following infrastructures: 'Provision of a fixed space through the city, for example, storage facilities for spare parts (primarily usable waste); It is great in the inner city, so it is publicly effective (here many shops have been empty for years!)' (response ID: 212).

The specific spatial situation leads to expectations, to clusters of vacancies in the urban fabric, and to structural holes. As the interviewee states, 'there are not enough people in the village to take the necessary initiative' (response ID: 220).

The motif to compensate and to fill social and spatial structural deficits in urban context is also reflected in the comments of the following interviewee: 'n the parish yard there's an old barn and stables which were saved by adolescents and adults from decay, and are now being further developed' (factory and cultural barn). When it comes to the question of impact - how should the open workshop develop in the next 5-10 years? - the interviewee said: 'to heal the district and spread happiness' (response ID: 59).

The narrative 'manifestation within the locale'
The linguistic attributions of the open workshop by the protagonists give expression to expectations, and to realization options, as they are bundled in the image of a creative milieu. Expressions such as, 'we want to give space', and 'creating value for neighbors is the main result' (response ID: 24) as well as, 'you like to travel in the SCHILLERKIEZ, live or work here and would like to network in the NEIGHBORHOOD and you want to do something with MEDIA?, then the SCHILLERWERKSTATT is the right contact for you" (webpage Schillerwerkstatt), are indications of a solidarity-neighborly culture of the neighborhood.

Other protagonists described their relationship to the district as follows: 'Founded in 2002 by a resident initiative, the Werkstadthaus has developed into a multi-faceted meeting point which is used by people

from the French quarter, from all over Tübingen and far beyond. Popular offers are, among others, the open labs and courses' (webpage Werkstadthaus Tübingen).

Temporary events in the district are conducive to social relations, as described in the following: 'On this day we were around 200 artists, politically active and socially committed. In the meantime, we have become more and remain what we were on the first day: a bunch of people with different views and approaches, with different life processes and backgrounds, elderly and younger; people who were already friends before August 22nd and people who had never met before their time in the quarter of the river' (webpage Gängeviertel e.V.).

The focus is on self-determination: 'The Honigfabrik is self-determined, artistic, craft, emancipatory, musical, political, local, theatrical, social, the beautiful and (...) committed'. In retrospect, it is therefore considered as a city and district developer for 'culture and art in the district, where everything has begun with the occupation of a vacant factory building. Since then, an urban process development has become a major cultural center' (webpage Honigfabrik, Wilhelmsburg).

The narrative 'multiple relations toward global processes'
Parallel to the application of multi-layered local and neighborhood references, open labs as a local branch are part of a larger movement, which is itself considered a counterweight to negative global processes (for example hand-made and self-made, machine-produced, or 'here' versus 'China'). Loose associations of the hackerspaces operate independently of the place, but engage themselves translocally in socially dense, small groups with common ideas. Institutional counter-horizons determine the self-understanding and the ideal orientation of the groups:

"As a self-managed project space, we also criticize state-run "open" bicycle labs, which are excluding due to bureaucracy, and thus xenophobic. We are also critical toward self-governing spaces, which work exclusively on a financial basis – our fellow-citizens do not need any papers (e.g. I.D. card, HartzIV card, or student card) or money (e.g. to pay a flat rate) to be part of it' (webpage Bikekitchen North-East). The majority of the labs, however, refer to global processes and understand themselves as part of an international movement. Their narrative is legitimated by means of a distinct spatial positioning:

'The basis of our activity is the Energizing Handbook of the Irish author Rob Hopkins, who has successfully launched the first Transition Towns in England. It has now become a global movement with more than 2,500 local initiatives. The Transition Town movement creates projects, accumulates ideas, and links existing initiatives to better deal with resources, energy and food' (webpage Workshop Transition Town Augsburg).

Counter-measures seem to be just as effective as affirmative global references: 'We offer and operate in Stuttgart an open workshop for human-friendly computer culture with programming and results tolerance. That means a hackspace. (...) We are experiencing today that more and more parts of our lives (are) captured, classified and processed by digital technology. States react with laws and interventions on emerging social phenomena. What can we do as citizens and autonomous-minded beings, so that the state and the company will not take the issue out of our hands?' (webpage Shack Stuttgarter Hackspace)

Local transitional geographies and the case of Open Labs

The open labs and bottom-up phenomena, which have been analyzed here on an empirical basis, can be approached – according to our results – as practical manifestations of the local. Based on the expressions of the protagonists it becomes clear that their area of action is primarily oriented to the proximate local

space. In respect to the expected upscaling processes they remain at least in a structurally contradictory position.

In the past few years, Gavin and colleagues (Gavin and Bouzarovski, 2013, Nevens and Frantzeskaki et al., 2013, North and Longhurst, 2013) have raised expectations that such 'innovation places' might play a positive role during a necessary transition to a more sustainable society and economic form. Taking this line of thinking further, I emphasize that urban spaces are the relevant context for niche phenomena, but an expected expansion – in the sense of upscaling – is not likely to take place. This result does not mean, however, that classical upscaling of such niche phenomena is not likely to be possible.

From a spatial perspective, however, this means that open labs are located in niches in copresent, multiple, local contexts. With their workshop practices, they refer relationally to specific local contexts. Bottom-up phenomena and their practice thus become visible as local manifestations and local responses to globally-spread crises. They react to multiscale and vertically effective challenges with horizontal practice in respect to regional, national, European, and global economic, ecological or knowledge-based crises, as well as ineffective top-down approaches. Their own practice is oriented horizontally in local networks of the social proximate area and is addressing solutions to experienced and felt grievances by showing pragmatic remedy within the local neighborhood.

A core motivation of the promoters and makers in open labs is to demonstrate that other, practical alternatives are possible in horizontal peer networks and that not only top-down hierarchies have mastered alternative solutions. Open labs show the feasibility of alternatives. This assertion, in addition to its daily practices, always carries a narrative of autonomy, a narrative stating that problem-solving can be formulated and made feasible.

Our results show that the observed practices are currently only possible locally, due to their concrete material expressions (empty houses, garbage, negative effects of mobility etc.). Temporary or regular meetings of peers and acting in free scenes form an interplay and interaction with the city as an effective, imaginary, and copresent action context. Bottom-up phenomena, according to our results, are extremely context-related but they are also copresent alternatives to local and extraterritorial miseries. Using two observation levels – on the one hand, subjectively-praxeologically related to the actual manifestations of open labs, and on the other hand, spatial-theoretically oriented transitional theories – has helped us to focus on the contradictory and intrinsic logics in the local vicinity of bottom-up phenomena.

Our contribution shows that practices of bottom-up phenomena can be adequately contextualized with the help of spatial theory as well as sociological concepts of professionalization. Thus, institutional, governance, regulatory and peer-related immanent logics, obstacles and contradictions to the expected upscaling practices can explicitly be mentioned and brought to the fore to feed the subordinate as well as socio-political disciplinary discussion. The results of this can generate meaningful deductions for options of the practical, as well as conceptual-analytical handling of such questions, and thus formulate societal policy responses to the expectations of upscaling. This aims to shed light on the social structure of open labs, to the extent to which their everyday practices, knowledge and interaction offerings relate exclusively to the local neighborhood, or whether they can be regulated in a communicative way over geographical, cultural and socio-technological distances in complex society.

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