

The Role of Urban Living Labs in Urban Form Production

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Abstract: In the context of studying public space as an open system and a dynamic element of encounter and interaction, much of the existing literature systematically explores the methodologies and definitions of participatory design, as a phenomenon with a strong appearance at the level of urban planning, its functions and objectives, its perspectives and limitations. Although much of the existing bibliography refers to Urban Living Labs as a modern type of participatory and experimental design, few are the cases where a more critical approach is adopted, seeking to explore the integration of this phenomenon into the wider urban development and the possible changes it may cause in urban social systems (Bulkeley, Coenen, Frantzeskaki, Hartmann, Kronsell, Mai and Palgan, 2016). The emerging interest in ULLs calls for further consideration and analysis. This paper is based on this research gap, by comprehensively reviewing the impacts that such a participatory and experimental planning approach can have on urban form, with a focus on its potential to configure urban form production and urban governance.

1. Introduction

Participatory design as a city planning tool is a crucial issue, in the framework of understanding urban form as a multidimensional process with many stakeholders involved. Methods of participatory planning vary and are mainly divided into physical and digital methods. One of the key elements of all the methods is the transfer of power between the participants as well as the subsequent negotiations of power relations within each process (Franta, Haufe, Dangschat and Witthöf, 2017). As for the participation per se, Marcus Miessen (2016) encourages conflict as a driving force for participation, despite mediation that leads to consensus, a view that converges with the “agonism” that poses the possibility of conflict as an arena where disputes can be resolved (Mouffe, 2000). In this context, the public spaces of the city are places where different perspectives are opposing between them.

Urban Living Labs are sites to design, test and learn in real time. They were “officially” introduced in the European Union (EU) in 2006, when the Finnish Presidency launched the European Network of Living Labs (ENoLL) and the European Commission began financing the creation of them (Nesti, 2018). Now, they constitute a usual participatory design method, under the umbrella of real world laboratories. There are three stages in their development that are not clearly distinguishable and often appear to overlap: design stage (when the context and activi-

ties are designed), implementation stage (when the ideas are put into practice) and evaluation stage (when results are discerned) (Menny, Palgan and McCormick, 2018). There are also four levels of user involvement along the life-cycle phases of Urban Living Labs that vary from information to consultation and co-creation (Arbter, Handler, Purker, Tappeiner and Trattnigg, 2007), with some theoretical approaches recognizing the latter as the ideal one. Some others argue that information and consultation should accompany all stages of the participatory process, for reasons of transparency and for keeping the interest of the participants alive (Franta *et al.*, 2017). However, some literature approaches state that the boundaries between the different participation levels are blurry and permeable and often highlight that different context may require different levels of participation. In general, as Bergvall-Kåreborn, Eriksson, Stahlbost and Lund (2009) argue, Urban Living Labs' purpose is to create a shared arena in which people and technology are gathered and in which the everyday context and user needs stimulate and challenge both research and development, since authorities and citizens take active part in this innovation process. Their five key characteristics are their geographical embeddedness, their experimentation and learning character, the intention for participation and user involvement, the leadership and ownership as well as the evaluation of actions and impact (McCormick & Hartmann, 2017).

This paper aims to provide an overview of the perspectives and dynamics of this kind of participatory process in the wider urban form. More specifically, it aims to recognize the role of Urban Living Labs in urban form production and urban governance, in addition to solving particular issues. Also, it aims to assess the specific elements that have a potential essential role under specific conditions.

2. Methodology

The literature review methodology is chosen in order to have a critical consideration of the existing research, in relation to the aims referred. The main articles chosen regarding the role of ULLs in urban form production are "Urban living labs and the role of users in co-creation" by Menny *et al.* (2018) as well as "Enhancing Early Innovation in an Urban Living Lab: Lessons from Espoo, Finland" by Juujärvi and Lund (2016). Menny *et al.* (2018) examine the transformative potential of ULLs, with a multiple case study research that focuses on four cases in Germany and Sweden, identified in European Network of Living Labs (ENoLL) database. Juujärvi and Lund (2016) focus on a specific Urban Living Lab in a suburban area of Espoo, Finland in order to address the importance of designing stage and early innovation processes. As for the potential of ULLs to affect urban governance, the articles chosen are "Trials and tribulations: Problematizing the city through/as urban experimentation" by Joshua Evans (2006) and "Urban living labs: governing urban sustainability transitions" by Bulkeley *et al.* (2016). Joshua Evans (2016) analyzes urban experimentation as a phenomenon with a remarkable significance in the contemporary period leading to a more provisional and adaptive understanding of the city, as an emergent and heterogeneous assemblage. Bulkeley *et al.* (2016) seek to develop a new perspective on ULLs in which forms of innovation and experimentation are part of a wider shift in the nature of urban governance.

This paper aims to gather, compare and group arguments appear in each of these articles, regarding ULLs' impacts on urban form and governance. These arguments will be also compared with other approaches as well as with the definition and main characteristics of an Urban Living Lab as an urban design participatory process.

3. Analysis/Results

Although Urban Living Labs are usually supposed to be a form of co-production, this is not always achieved, but it often depends on some conditions or factors (Nesti, 2018). Also, their transformative potential regarding urban morphology is often interconnected with user participation and involvement as well as with their characteristics and methods. ULLs' ability to substantially affect urban form and to have an important role in city planning needs a further examination.

Menny et al (2018) discuss the link between user involvement and the transformative potential of ULLs. Their findings underline the important role of user involvement in the effect of ULLs, showing that a combination of different user participation levels in different stages of the lab's life cycle can enhance the outcomes and transformative potential of it. Also, using a variety of methods and including different stakeholders in different stages is important. This suggested approach can be connected and can respond to a view that wants all the ULLs' methods to be socially selective. As Franta et al (2017) mention, "no participation process attracts all people in the same way and as a result certain social groups are being over- or under-represented in the processes". This fact is associated with the format and the setting of each activity or method.

Although user involvement has a positive aspect in the transformative potential of ULLs, is not the only precondition. Governance structure, leadership and power distribution are also critical factors and indirectly affect the urban form production (Menny et al, 2018). Juujärvi and Lund (2016) have a similar approach, highlighting the importance of successful management of an ULL to catalyze sufficient urban form changes. Their case study on such an example, shows that it is crucial to combine bottom-up and top-down approaches throughout the several stages of the lab. As they mention "The bottom-up approach is a suitable starting point for problem definition and brainstorming, but it must be adjusted by a top-down approach that provides information about official visions, goals, plans, and procedures. The top-down approach can be empowered by civil servants and politicians who can be equal participants or otherwise engaged in living lab activities". In these terms, successful management of Urban Living Labs can lead to urban space co-production by several groups, but poor management can surely affect this potential. Although the balance between steering and controlling is quite delicate and needs a careful consideration, it appears that having a clear leader or owner is crucial for Urban Living Labs to be effective (McCormick & Hartmann, 2017).

Despite ULLs' transformative potential regarding urban morphology, they can also be considered as a part of a wider shifting in the nature of urban governance, where different forms of experimentation and innovation are recognized as a means of specific urban conditions to govern (Bulkeley *et al.*, 2016).

Joshua Evans (2016) claims that although urban experiments such as ULLs may have specific goals, they are also open processes and their evaluation outcomes are usually uncertain. This fact gives them the ability to resist prevailing forms of urban transitions and governance. As he mentions "urban experiments establish a process of governance that challenges and disrupts" giving an important role to urban issues such as local democracy and the "right to the city". Evaluation is important to revisit or redefine the goals and visions of the labs over time through knowledge and ideas of all the stakeholders, providing the Urban Living Labs' with the potential to be flexible to multiple ideas and to produce collective outcomes (McCormick & Hartmann, 2017). ULLs' open evaluation stage creates the potential to overcome the existing forms and ideas and gives space to unconventional knowledge to be revealed. Another ap-

proach suggests that what is critical to the governance potential of ULLs are the ways in which they constitute, and are constituted by, social networks, expectations or visions, and forms of learning (data collection techniques, forms of participation, etc.) (Bulkeley *et al.*, 2016). In that view, ULLs are seen as a way to set up demonstrations and to trial different kinds of intervention in the city, bringing together multiple actors to address the urban challenges and to foster learning through innovated forms of open and engaged experimentation. Configuration or design of the labs can provide a new learning arena that marks out a particular type of governance innovation. Understanding the means through which power and agency are orchestrated and take effect in this arena can help unpacking the causal mechanisms in these institutional configurations through which governing effectively takes place (Bulkeley *et al.*, 2016).

4. Discussion/Conclusion

In conclusion, it is clear that Urban Living Labs, as experimental processes, have a great potential to configure urban form production and urban governance and that it is crucial to further explore the conditions and factors that allow this potential to be revealed. There is an urgent question about when and how this transformational potential of them is achieved and under what preconditions.

The findings above, underline the important and direct role of user involvement and inclusion in methods and activities of such a process to be more transformative. They also refer to the indirect but significant role of governance structure, leadership and power distribution that incidentally affect the urban form production. Some findings also set three elements, the design, practices and processes of ULLs as the critical factors in terms of contributing to urban transformation. As for ULLs' potential to affect urban governance, the evaluation stage is considered as an important stage, because of its flexibility and openness that create innovative unconventional knowledge. The design of the ULLs, is surely important and affects evaluation stage configuring the ways knowledge is being collected and the processes' level of openness.

We can observe and argue that some of the five key characteristics of Urban Living Labs, mentioned in introduction, are fluid and have the potential to reshape, redefining the whole process. These characteristics are the experimentation and learning character of the labs, the intention for participation and user involvement, the leadership and ownership as well as the evaluation of actions and impact. They all affect the integration of ULLs into the wider urban development as well as the possible changes they may cause. Finally, it is important to mention that further consideration and empirical analysis is needed to provide us with more particular results and specifications.

References

- Arbter K., Handler M., Purker E., Tappeiner G., Trattnigg R. (2007), *The Public Participation Manual: Shaping the Future Together*. ÖGUT-News, 1, 2007.
- Bergvall-Kåreborn B., Eriksson C.I., Stahlbost A., Lund J. (2009), *A Milieu for Innovation – Defining Living Labs*, in The 2nd ISPIM Innovation Symposium – Stimulating Recovery – The Role of Innovation Management, New York.
- Bulkeley H., Coenen L., Frantzeskaki N., Hartmann C., Kronsell A., Mai L., Palgan Y.V. (2016), *Urban living labs: governing urban sustainability transitions*, in *Current Opinion in Environmental Sustainability*, 22, pp. 13-17.
- Evans J. (2016), *Trials and tribulations: Problematizing the city through/as urban experimentation*, in *Geography Compass*, 10(10), pp. 429-443.

- Franta L., Haufe N., Dangschat J.S., Witthöf G. (2017), *D2.1 Handbook for Participation Strategies for Mobility Issues in Neighbourhoods* (Version 2.0), SUNRISE Consortium.
- Juujärvi S., Lund V. (2016), *Enhancing early innovation in an urban living lab: Lessons from Espoo, Finland*.
- McCormick K., Hartmann C. (2017), *The Emerging Landscape of Urban Living Labs: Characteristics, Practices and Examples*.
- Menny M., Palgan Y.V., McCormick K. (2018), *Urban living labs and the role of users in co-creation*, in *GALIA-Ecological Perspectives for Science and Society*, 27(1), pp. 68-77.
- Miessen M. (Hrsg)(2016), *Crossbenching: Towards a proactive mode of participation as a Critical Spatial Practice*, Sternberg Press, Berlin.
- Mouffe C. (2000), *The democratic paradox*, verso.
- Nesti G. (2018), *Co-production for innovation: the urban living lab experience*, in *Policy and Society*, 37(3), pp. 310-325.