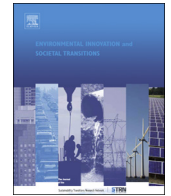Contents lists available at ScienceDirect

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Viewpoint

Co-producing urban sustainability transitions knowledge with community, policy and science

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A B S T R A C T

This viewpoint presents insights on designing, engaging with and researching multi-stakeholder engagement spaces based on the experience of the ARTS project (2014–2016), active in five European cities also relevant for a broader European scale. We argue that those spaces represent an important new instrument of participatory governance that can elucidate the way different actors like community initiatives relate to and employ planning and policy contexts for working towards sustainable urban futures. The multi-stakeholder engagement spaces are analyzed regarding three functions they fulfill: co-creating new knowledge for action, making sense of contemporary transitions, and, exploring how sustainable solutions impact transitions. The lessons learned focus on the roles of different actors within those spaces as well as the link between the multi-stakeholder engagement spaces and a broader local context. We name three caveats including deeply entrenched mistrust between local transition initiatives and local government representatives, existing power imbalances and inclusivity.

1. Introduction

Sustainability transitions are multi-actor processes, requiring collaborative efforts across sectors to shift to and establish new ways of doing, thinking and organizing that aim to achieve sustainability (Frantzeskaki et al., 2012). Having a closer look in examining the benefits and limitations of multi-actor engagement processes and designs of these for facilitating urban sustainability transitions is important for progressing research and practice for the governance of transitions (Frantzeskaki and Shiroyama, 2015). At the same time, examining how sustainable solutions emerge in cities, we evinced that local transition initiatives play a role in the way sustainable solutions are tested, advanced and institutionalized (Frantzeskaki et al., 2016). Local transition initiatives are actor collectives led by civil society, business entrepreneurs and partnerships of those that actively work on sustainability solutions in their local context and contribute in accelerating urban sustainability transitions (Ehnert et al., 2018). Local transition initiatives are thus actors of urban change worth engaging in transdisciplinary research to understand how their actions and interactions with other urban agents of change play out in urban sustainability transitions. Transdisciplinary research involves a wide variety of engagement means and settings. We make the case that a reflection upon the experiences in multiple, diverse multi-stakeholder engagement spaces deserves attention. We believe that the lessons we draw from the multi-actor engagement spaces are relevant for designing, organizing and institutionalizing interactions and co-production processes amongst all new actors that play, or can potentially play a role in accelerating sustainability transitions.

We draw from the research of the ARTS project, in which the key objectives of the multi-actor engagement spaces project were to

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bring together knowledge of scientists and of local transition initiatives about existing sustainability solutions and how they are scaled, as well as to enrich common understanding on the relations between different urban change agents as they impact on sustainability transitions. New relations between actors require changes in existing institutions or creation of new institutions to facilitate and foster these new relations to be conducive to sustainability. Thus, by examining the functions of multi-stakeholder engagement spaces, we contribute to the scope of the special issue (on how community initiatives instrumentalise public policies) by showing how the relations for mutual learning and co-creation between local community initiatives (as well other types of transition initiatives) and local government actors unfold and change over the course of a sustainability transition in an urban context.

In Section 2 we present the identified functions of multi-actor engagement spaces grounded in recent literature of knowledge co-production and community engagement writings. We then present our insights on lessons learnt (Section 3), tensions (Section 4) and suggestions for constructive processes from multi-actor engagement spaces (Section 5) that we designed and realised with the ARTS project from 2014 to 2016. The events on the basis of which these insights and conclusions were formulated can be broadly divided into the following categories: (a) local workshops (co-)organized by the city project teams, (b) conferences (co-)organized by the ARTS project (2 editions of Informed Cities Fora in 2014 and 2016), and (c) dialogue events organized in the case study cities (4 dialogues in total in Budapest (2014), Genk (2015), Stockholm (2015), Dresden (2016)) aiming to trigger critical thinking about on-going acceleration dynamics in cities. Taken together, these multi-actor engagement spaces brought together relevant stakeholder groups and unusual suspects including researchers, policy makers and public sector representatives, representatives of transition initiatives, artists and cultural practitioners with an interest in sustainability transitions, social entrepreneurs in Budapest, Brighton, Dresden, Genk and Stockholm.

2. Functions of multi-stakeholder engagement spaces for urban sustainability transitions

Multi-stakeholder engagement spaces are institutional spaces in which multiple actors convene to allow exchange of ideas, dialogue on issues and solutions and interactions concerning targeted problems and their proposed solutions. We identify three functions for designing, engaging with and researching multi-stakeholder engagement spaces: co-creating new knowledge for sustainable solutions, making sense of contemporary transitions, and, exploring how sustainable solutions operate and impact transition dynamics in the making.

Multi-stakeholder spaces enable participants to *co-produce new knowledge to advance urban sustainability transitions*. Most of the literature on public participation focused on the methods to engage stakeholders for legitimizing plans and policy implementation, with their use often mandated by legal requirements. Participation was often criticized as characterized by tokenism. As the practice of participatory research and participatory policy making matured, the focus broadened to engaging stakeholders for providing ideas and information, for monitoring and assessing proposals for solutions (including plans) and achieving policy support (Coenen, 2009). Advancing in this pathway, different multi-stakeholder engagement settings emerged that aim at co-producing new knowledge for action for transitions. Transition management process designs such as urban transition labs (Nevens et al., 2013; Ferguson et al., 2013; Wittmayer et al., 2016) and knowledge co-production operating spaces (Frantzeskaki and Kabisch, 2016) showcase that co-creation enables collaborative learning that in turn, "improves the use of knowledge in practice" (Wyborn, 2015, p.59; Daedlow et al., 2016).

Multi-stakeholder spaces allow participants to *make sense of transition dynamics in an urban context*. Engaging in multi-stakeholder spaces can enrich knowledge (of participants in these spaces) about tensions and conflicts related to contemporary urban transition challenges (Voorberg et al., 2014, p.17). Considering that urban development touches contested issues and different views on what responds to social needs, examining this plurality requires new forms of collaborative urban planning. Next to this, decisions on how to develop and/or regenerate urban places no longer happen behind local government's closed doors; they rather turn into a public issue that requires involvement of multiple stakeholders. As such, stakeholder engagement can fill in the institutional void of 'agreeable future uses' in exploring possibilities while considering social and ecological needs simultaneously (Celata and Coletti, in this special issue address this as well with a focus on urban gardening by community-led transition initiatives). Therefore, creating space for contesting existing narratives of urban sustainability as part of collaborative dialogues can progress policy development and planning and "profoundly change decision-making structures on the ground" (Wyborn, 2015, p.57). In these spaces, it is important to give attention to the tensions that emerge, how they change over time, and, have discussions that are facilitated to be constructive.

Multi-stakeholder spaces allow participants to *examine how innovative sustainability solutions operate and impact urban transitions*. Institutional proximity of the urban deems multi-actor interfaces critical for finding solutions and establishing new forms of collaboration for scaling these solutions (Wittmayer and Loorbach, 2016; Frantzeskaki et al., 2014). Social and policy learning come together in multi-actor engagement spaces in which stakeholders get empowered to act while providing input and evidence into scientific practices and theory development (Udovyk and Gilek, 2014, p.17–18). Working together for sustainability solutions is empowering for multiple stakeholders in being active in alternative ways for their place and relevant policies (Wittmayer et al., 2014, 2016).

3. The lessons learnt

First, issues related to urban sustainability are at heart of the debate, locally and Europe-wide, but require framing that connects with local (social, economic and ecological) challenges. Setting the topic of the discussion allows for open debate between the different actors involved. In all the regional dialogues, local policy makers found it interesting and constructive to discuss with local transition initiatives that they had no previous connections with before, often staying below the radar of standard public engagement

and consultation events. Due to personal connections fostered by these dialogues, many local transition initiatives found entry points in local government by identifying people inside local administration with common interests and motivations in working for sustainability. From our experience in all five regions, we identify that the topic on urban sustainability framed through the local challenges allowed for tensions to surface, and opened the space for fruitful debates instead of discussions on general positions on sustainability.

Second, tensions of urban transitions can be revealed in multi-stakeholder spaces. With the regional dialogues as well as with the Informed Cities Fora, we created different 'dialectic spaces' where community (represented by local transition initiatives, civil society organizations and activists), policy and science came together. In these fora, tensions related to inclusivity, legitimacy, trust, resource distribution, scalability of solutions, and, mutual expectations from local transition initiatives and local governments were brought to surface. We observed that the sectoral divides are increasingly getting porous, allowing for a more integrated understanding of the tensions in place. In these local arenas of collaborative learning, new ways to organize local governance and local economy were discussed more openly than in traditional (consultative) public participation settings. From our experience in these spaces, we propose that new institutional spaces need to be open and facilitated in a flexible way, and to tap into the current developments of the city for contributing to urban sustainability transitions (Gorissen et al., 2017).

Third, a solutions-oriented discussion allows people to find under-utilized possibilities for collaborating for urban sustainability transitions. The focus on existing solutions in the form of new practices and new institutions established by local transition initiatives was what made the exchange taking place in multi-stakeholder spaces both interesting and constructive. For the stakeholders we interacted with, the focus on real-world sustainability solutions was of paramount importance for rethinking their own practice. This is in alignment with the value of transdisciplinary and co-production approaches in addressing the "usability gap" between science and policy (Frantzeskaki and Kabisch, 2016; Thompson et al., 2017). It balances the power scientists (may) have in framing, examining and assessing sustainability challenges by interacting with community and policy actors that contribute tacit knowledge for the same challenges (Wesselink et al., 2013) and contribute a sense of urgency for actionable knowledge due to the need of policy to act upon challenges.

Fourth, the complexity of urban sustainability transitions requires reaching out to diverse stakeholders, bridging existing communities and networks. This process can be time-consuming and at times frustrating, for both participants and facilitators. Used to talking to people who speak the same language, have similar ways of working or share similar concerns, people fear leaving their comfort zones and need time to find a common ground with others. Working in these co-production spaces, we observed that a new sense of shared purpose and social ties were created between people previously working in parallel. This further showcases that creating new partnerships is instrumental to making an impact in sustainability transitions (Frantzeskaki et al., 2014) and it supports democratization of knowledge on sustainability solutions that is paramount for those solutions to be legitimized and widely accepted (Carton and Ache, 2017).

Fifth, we have identified the need to work with both the place and the community for embedded understandings of what contributes to urban transitions. There is no better way to learn than by experience. This holds particularly true for urban sustainability transitions, especially when the people involved in the dialogue come from different backgrounds and therefore may not be able to communicate so easily on an abstract level. Experience of a place, its history and challenges, offers a unique opportunity for learning in a way that cannot be experienced in a conference room (Williamson and Roberts, 2010; Devolder and Block, 2015). However, the place should not be seen in isolation from the community that lives in it and forms it. The Informed Cities Fora were excellent examples of events anchored in a certain place and community, with field workshops organized by local transition initiatives involved as service providers. Organising events in such a way can be more time-consuming and at times, costlier; however, the benefits for participants and local community are much greater. Based on our experiences, we point that to create conditions for an experiential and place-based learning, it is important to find ways for participants to experience the place, ideally with local community representatives and local transition initiatives as their guides, for mutual learning. It is also important to ensure that the program of the event includes people telling their own stories and not just others reporting on the stories they collected.

4. The caveats

4.1. Trust and the fear of cooptation

Engaging with local transitioninitiatives can be challenging, especially on the issues of sustainability that are value-laden and contested. It is frequently the case that some local transition initiatives want to share and showcase their practices but they are not always interested in collaborating with local governments due to issues of trust (Frantzeskaki et al., 2016). We observed that local transition initiatives fear of being coopted when interacting with local governments resulting in them conserving their distance and autonomy; a situation also reported by Celata and Coletti, 2017. Local government representatives on the other hand, often resort to acting defensive, especially when blamed for past or present actions of the city administration that they might not personally agree with or had little chance of influencing. It is important therefore, to invest in building trust between local transition initiatives, local policy makers and scientists, and mediate the multi-stakeholder engagement process. Building trust is vital given the diverse and often competitive funding landscape in which local transition initiatives operate that can compromise their initial goals to fulfill administrative goals (Dinnie and Holstead, 2017). In this situation, the guiding principle is for researchers to be honest and open about the aims of the collaboration, to create "opening spaces for participation" (Vignola et al., 2009) and to consider research as "a social activity" also accountable for social impact (Pain et al., 2011; Spruijt et al., 2014). Researchers have thus to reflect about their role and the mediating position they take between local transition initiatives and policy makers, considering potential risks for all

parties involved.

4.2. Peeling off local transition initiatives for the sake of 'research' and political agendas?

Local transition initiatives (especially those led by civil society) are important for empowering local actors "to participate in policy making" (Vignola et al., 2009, p.695) and for sharing their knowledge on how to make and scale sustainability solutions. When scientists and/or local policy makers discover impactful local transition initiatives, they often invite them in different fora and promote them as 'iconic projects' that showcase possibilities for contributing to urban sustainability agendas. With their limited resources and sometimes unbalanced exposure and demands, local transition initiatives become vulnerable and peeled off in serving different agendas (Frantzeskaki et al., 2016). For this to be alleviated, a new form of commitment is needed both by local governments and by local transition initiatives to respect the autonomy of local transition initiatives in having their agenda and (social) mission and be considered as 'associates' in specific topics or activities (Voorberg et al., 2014). Both policy makers and researchers should respect time, effort and resources local transition initiatives can and may contribute and seek ways to compensate and/or acknowledge them.

4.3. Open and inclusive to whom?

The results we present in this commentary are based on all the interactions, observations we had with interested actors from community, policy and science in five European cities from the ARTS project. The group of actors however was biased in terms of relationships that existed between scientists and community and policy as well as relationships that were established between these groups due to the research scope of our project. It remains to be explored how to further engage with community actors and local transition initiatives that were not as established nor as impactful yet as those we selected to engage with. At the same time, it was a challenge on how much effort and time researchers could claim from stakeholders for carrying out this new mode of knowledge co-production that requires intense and continuous interactions with multiple stakeholders. The issue voiced early on was about the power relations between researchers versus the 'other' stakeholders since researchers' time was paid for whereas the 'other' stakeholders – especially local transition initiatives – were requested to invest their personal time, or, volunteer their professional time. This makes such processes limited in scope since only a certain type of stakeholders can volunteer their time and access personal and 'organisational' learning from such engagement processes. This selection of stakeholders was also influenced by context, meaning that privileged stakeholders were easier to reach and include. As such, it remains as a future challenge of co-production processes on how to be adaptively inclusive to stakeholders representing a more diverse cross-section of the society.

5. Conclusions

Understanding that diversity of formats for multi-stakeholder engagement is required for institutional spaces for sustainability transitions to operate is crucial for bringing forward the knowledge of transition initiatives and the ways they utilize or being enabled by urban policies and plans. In this viewpoint, we implicitly show that building new institutional spaces is the prerequisite for unveiling the relations between transition initiatives and other actors as well as between transition initiatives and public institutions (including but not limited to policies). The multi-stakeholder engagement spaces, with their open agenda and tendency to critically reflect upon the very notion of sustainability, are not easily embedded in mainstream policy processes and perhaps fitting square peg into a round hole is not worth wasting our energies on. However, the collaborative learning, collective and individual empowerment, as well as cross-sectoral connections they provide are extremely valuable for any community and can accelerate urban sustainability transitions. We argue that this is where researchers step in, not only acting as facilitators but also lending the whole process a respectful, non-threatening veneer that comes with the emblem of science, sheltering the multi-stakeholder spaces from the storms of everyday politics, at least in their first fragile period. If the multi-stakeholder engagement spaces fulfill their promise of equipping its participants with new knowledge for action and better understanding of transition dynamics, they will be able to continue without the protection of science and will find their own ways to influence a broader local context.

Acknowledgements

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