Smart Urban Intermediaries

Connecting people.
Changing communities.

Smart cities, social innovation and smart urban development

October 2018

About the project

Smart Urban Intermediaries (SmartUrbI) is a collaborative research programme (2017-2019) co-led by Tilburg University, University of Edinburgh, University of Birmingham and Roskilde University. It is funded by JPI Urban Europe (P/693443) through NWO, Innovation Fund Denmark, and the UK Economic and Social Research Council (ES/R002991/1).

SmartUrbI works with a wide range of public, third and community sector partners across the four countries. The purpose is to improve understanding and support for people who make a difference in urban neighbourhood (aka 'smart urban intermediaries'). The project entails collaboration across 'local labs' in Birmingham, Amsterdam, Copenhagen and Glasgow. The labs are sites for co-inquiry between researchers and practitioners exploring barriers and enablers to smart urban development and social innovation. The project will also entail study visits to Portugal and Poland, and a final conference in Denmark in September 2019.

About this working paper

This working paper was co-written by the SmartUrbI team to inform the development of the research, and it's part of a series of papers that reflect on-going thinking rather than final project findings. Questions or comments can be sent to: smarturbi@gmail.com

About the research team

For more information about the project please see our website, where you can also subscribe to the newsletter: http://smart-urban-intermediaries.com/. Follow us on Twitter: @Smart_Urb_I

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Rationale

The SmartUrbI project is framed and situated within a broader European Research Area funding stream on 'smart cities' and 'smart urban development'. The SmartUrbI project is distinguished within the broader ENSUF portfolio by an emphasis on co-creation, emphasising soft skills (local knowledge, experiential expertise, relational skills) as a social form of innovation rather than a structural or technological fix. This paper will examine the linked discourses on 'smart cities' and social innovation to clarify the relevance and utility to the substantive aims of SmartUrbI and the positioning and contribution that we may offer. As such, this paper aims to:

- provide a brief overview of the discourses on smart cities and social innovation;
- position SmartUrbI within the broader 'smart cities' and 'social innovation' literatures;
- assess the relevance and utility of this positioning in relation to our research questions and wider learning;
- denote the potential contribution/ cross-fertilisation of SmartUrbI and smart cities/ social innovation.

Topic overview

'Smart cities' may be positioned as a response to cross-cutting or so-called 'wicked' urban problems, such as sustainability. Beyond this basic premised the definition of 'smart cities' is wide-ranging. This ambiguity is argued to stem from mixing what smart cities are (smart people, smart governance) with what they aim to achieve (smart economy, smart mobility, smart environment and smart living) (Meijer and Bolivar 2016: 298). Meijer and Bolivar argue that we can differentiate between process (highlighting active engagement of citizens and stakeholders in urban governance) and outcome-oriented (improving a service, quality of life etc) definitions of smart cities (2016: 401-402). Thomas et al (2016) suggest that there is no agreed definition of 'smart cities' because there is no 'one' smart city. Kitchin (2014) shares this idea, citing concern that the discourse of 'smart cities' flattens the diversity across cities. In contrast, Cowley et al talk of smart cities being 'situated bodies of practices' which are shaped by 'contingently shaped both by local factors and by broader (policy) discourses' (2017: 3).

The discourse on smart cities can be usefully delineated into 'Smart City 1.0' and 'Smart City 2.0' (Saunders and Baeck, 2015). Smart City 1.0 emphasises technological innovation in 'hard' policy domains (eg. infrastructure, natural resources) (Saunders and Baeck 2015). Characteristic of this discourse are exemplar ICT projects forged through a technocratic vision, aiding a deregulatory and corporate agenda, enabled by and for the benefit of a gentrified, highly-educated, technologically-enabled elite (Kitchin, 2014,

2015). Critical perspectives highlight the dangers of a perceived technocratic and corporate capture of 'smart cities'; exacerbating rather than challenging neo-liberal governing strategies. As Carvalho (2015, p. 44) argues 'at best, a top-down 'smart technology' push is likely to be insufficient' in addressing cross-cutting urban concerns. In response, Smart City 2.0 seeks to address the democratic deficit associated with 'smart cities' as a means to social, rather than solely technological, innovation. As Coe et al note,

'[S]mart cities require more than just building band width, but instead need means to connect citizens and governance structures 'to ensure that all citizens have the opportunity to benefit from the knowledge-based networked economy' (2001: 90).

Citizenship shouldn't just be a form of data collection but instead should emphasize deep and meaningful civic engagement or community control in questions about local urban planning and design' (Sadoway and Shekhar 2017: n.p.). In parallel with more familiar debates on collaborative or interactive urban governance, the discourse of smart cities emphasises 'smart urban governance' (Meijer and Bolivar 2016), understood as 'pro-active and open-minded governance structures, with all actors involved' (2012). Similarly with debates on active citizenship, the corollary here is 'smart' or 'entrepreneurial' citizenship, positioning citizens as civic or political actors rather than passive recipients or users of public services (Cowley et al 2017). As Sadoway and Shekhar (2017) note, the emphasis here is on harnessing the 'collective intelligence' (Coe et al 2001: 91) or 'social capital of smart communities' (2017: 145).

Social innovation

The literature on social innovation is dispersed, yet we can identify key definitional threads (Moulaert et al 2005):

- response to cross-cutting urban problems, specifically social exclusion;
- link between gains in social capital (linking, bridging, bonding) and more effective and efficient outcomes (including changes in social and governance relations);
- multidisciplinary approach allowing for the deliberate intersection of different expertise and experience to allow creative synergy/ intellectual and social creativity;
- social innovation can be a means in itself (community building, co-production) as well as a means to an end (product, service)

At the core is an emphasis on social inclusion, both in terms of process (how social innovation is designed, for example empowering social actors) and outcome (who social innovation benefits, for example, benefits accrue collectively rather than to a private individual, organisation or demographic elite). In this sense, social innovation may be positions as a response to neoliberal governing strategies (Swyngedouw 2005). Others have argued instead that 'with its interdisciplinary, interconnected and holistic understanding of social needs and by promoting social values, social

innovation is perhaps better placed to develop sustainable responses to contemporary societal challenges than free market solutions' (Grimm et al 2013, p. 450).

Social innovation has emerged as a vital policy instrument in the urban context. However, there is a little understanding – stemming from a lack of systematic research – about how social innovation can overcome the specific challenges of the urban context, 'the dispersal or competencies across a wide range of political domains, the absence of integration of or co-ordination between different geographical scales and, most importantly, the marginalization of the needs of fragile or weaker social groups within the urban fabric' (Moulaert et al. 2005, p. 1975).

What role for smart urban intermediaries?

A focus on 'smart urban intermediaries' may offer a connection between smart urban governance, smart citizenship and social innovation, addressing a critical gap in existing research and theorising. The role and contribution of smart urban intermediaries or 'collaborative capacity builders' (Weber and Khademian 2008, p. 334) is currently under-developed; yet the key strands of such a role resonate with our existing analysis. For example, highlighting:

- transfer, receipt and integration of knowledge across participants in a network (Weber and Khademian 2008);
- bridging across networks (Weber and Khademian 2008);
- stakeholder relations: ability to cooperate amongst stakeholders, gain support of leadership, structure alliances, work under different jurisdictions (Scholl et al 2009, Chourabi 2012);
- 'network building (to bring together resources, but also the users and developers), infrastructure matching and expectation building' (Carvalho 2015, p. 47).
- 'global carriers' of best practice, standards, institutionalised learning, and other intermediating resources such as networking and lobbying, which are informed by, and in turn inform, concrete local projects' (Seyfang and Haxeltine 2012, p. 383).
- 'recognition of plural visions and [to work] out how they may interact' (Moulaert et al 2005, p. 1981)

Proposed avenue for future development of research on social innovation, that again resonates with the objectives of SmartUrbI include:

- Situated agency as a capacity for social innovation: social innovation is not just a product of skills, expertise, networking and so on (as many elsewhere focus on) but also 'is embedded in the dynamics of governance practices, with their complex interplay of formal and informal relations' (Gonzales and Healey 2005 p. 2056).
- Social practices of social innovation: 'deeper frames of reference and cultural practices which define how people make sense of their collective worlds and engage cognitively and bodily in their day-to-day routines' (Moulaert et al 2005, p. 1984); how social structures 'enable and constrain agents while acting upon those practices' (p. 43).

Cross-fertilisation

The value for SmartUrbI in engaging with literature on social innovation is not simply the contribution that we can make to existing debates, but also in how concepts associated with social innovation can help our own theorising of practices and significance of smart urban intermediaries in 'making a difference to urban neighbourhoods. For example,

- develop a more fine-grained analysis of the practices of smart urban intermediaries (RQ1/2);
- understand the wider impact and significance of smart urban intermediaries ie. how their work can have influence, 'latch on' or 'stick' within the broader urban landscape (RQ3); and
- how to foster and protect smart urban intermediation (RQ5).

Design-thinking

The literature on social innovation draws on the language and ideas of 'design thinking' (Durose and Richardson 2015). Design-thinking is necessarily hopeful, expressing a substantive and instrumental ambition to achieve better outcomes. Design-thinking is not about developing an optimal prescription but rather about questioning presumptions and existing ways of doing things. Design is both creative and inventive and deeply human (Durose and Richardson 2015). Burns et al (2006, pp. 18–23) list a number of characteristics that successful social, design-led innovation shares:

1. A user-centric perspective (p. 18)
2. Looking from the point of view of the user
3. Making things visible
4. Prototyping (p. 19)
5. Designing and redesigning the brief (p. 20)
6. Collaborating between differences (p. 20)
7. Employing participatory design techniques (p.20)
8. Building capacity, not dependency (p. 21)
9. Designing beyond traditional solutions (p. 22)
10. Creating fundamental change (p. 23)

So, social innovation may be understood as a form of 'design–by-doing' (Björgvinsson, Ehn, and Hilgren 2012, p. 106). Understanding smart urban intermediaries as designers is not to see them as 'form-givers' who dictate forms with little variation possible, but instead as 'enablers' who construct systems that allow user adaptations to deal with complexity and spectrums of needs (Heskett, 2005, p.131).

Infrastructuring

Design in the context of social innovation is not limited to designing 'things' (products, services, objects, strategies etc), 'design-by-doing' is also about 'designing beyond the specific project' (Björgvinsson, Ehn, and Hilgren 2012). For example, re-framing, modifying spaces, opening up new ways of thinking and behaving. Within the social innovation literature, this idea is termed

'infrastructuring', in a sense of laying the groundworks or building the connections for future designs. Infrastructuring 'provides an open-ended design structure without predefined goals or fixed timeline' and 'is characterised by a continuous process of building relations with diverse actors and by a flexible allotment of time and resources' (Hillgren et al. 2011, p. 180). Brown and Wyatt (2010, p. 33) describe three stages: inspiration, ideation and implementation:

'Think of inspiration as the problem or opportunity that motivates the search for solutions; ideation as the process of generating, developing, and testing ideas; and implementation as the path that leads from the project stage into people's lives… Projects may loop back through inspiration, ideation, and implementation more than once as the team refines its ideas and explores new directions' (Hilgren 2013, p. 33).

This idea resonates with both Lowndes' work on institutional entrepreneurs (2005) and Freeman's work on epistemological bricolage (2007), in suggesting that 'designers' build up a repertoire of practice to employ at an unspecified date or opportunity. So even in failure, the design is not 'lost' but instead is 'lying in wait' to find new momentum with a new alignment of discursive and institutional forces (Moulaert et al. 2007, p. 201). The development of this repertoire allows designers to be ready for the unexpected; adaptability and incompleteness are paramount (Björgvinsson, Ehn, and Hilgren 2012, p.102).

'Trickle up'

This inter-related idea is the converse of the 'trickle down' metaphor for how wealth creation for the few would generate benefits for the masses. 'Trickle up' refers to the identification of a disparity or moment where established or hegemonic discourses and practices may be disrupted or are amenable to change (González and Healey 2005, Moulaert et al. 2007) and the opportunity for social innovation to be institutionalised or scaled up/out (Novy and Hammer 2007). This idea again resonates with theories of policy-making such, as Cohen et al's 'garbage can' model of organisational change (1972; 1979); Kingdon's 'policy streams' theory of policy making (1995); and Kitschelt's work on political opportunity structure can be useful in conceptualising a 'way in' for social innovators (1986, pp. 63–64).

Seeding and sediments

The challenge posed here of how to embed social innovation suggests a shift in emphasis from social innovation as a means in itself (i.e. as a temporary or contained process of addressing social exclusion) and more of a means to an end (counter-hegemonic struggle). Seen in this way, the success of a social innovation is a product of the extent to which it is able not just to achieve its 'innovative' objective but also the extent to which it is able to 'seed' on-going change (Gonzales and Healey 2005). In a similar vein to Bjögvinsson et al (2012), Gonzales and Healey suggest that 'episodes in socially innovative governance mobilisation need to be analysed not just in terms of what they

directly achieve and the resistances they encounter. It is also important to examine the 'seeds' and 'sediments' they leave behind as positive and negative resources for future initiatives' (2005, p. 2066). Social innovation designers and researchers need to ask what seeds they can plant and what already exist.

Socio-technical transitions

The literature on social technical transitions may be useful in understanding how social innovation may be stimulated and supported. Existing literature frames smart cities as a form of socio-technical innovation (Carvalho 2015). In this analysis, the urban regime is the socio-technical system. The regime can be challenged by emergent socio-technical configurations 'incubated' in 'niches': small, localised experimental settings in which new technologies and innovations are tested by new constellations of actors, with the ambition to present alternatives to the current regime; for example early experiments in solar power or organic food production. Over time, socio-technical change can result from the landscape's pressures (for example, climate change threats or fast urbanisation) but also—and often in tandem—from the unfolding and consolidation of new technological niches. Strategic niche management is a way to craft small scale experiments and make them stick in the broader context of regimes and landscapes; 'it relies upon network building (to bring together resources, but also the users and developers), infrastructure matching and expectation building (Carvalho 2015, p. 47). So, experimentation is key, but so is incubation and recognition of the resonances between small-scale 'smart city' oriented innovations and broader socio-technical and institutional landscapes and regimes.

Acknowledgements

The Smart Urban Intermediaries team would like to acknowledge and thank Max Lempriere for his contributions to this working paper.

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Additional reading

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URBAN EUROPE

Project no. 693443

Project no. ES/R002991/1

Innovation Fund Denmark

Netherlands Organisation for Scientific Research

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University of Birmingham

Roskilde University

The University of Edinburgh