Self-organisation challenging institutional planning: towards a new urban research and planning paradigm – a Finnish review

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The aim of this special issue is to take a limited but multi-voiced look at the broad field of self-organisation and assess its implications for urban planning. We invited participation from researchers and actors currently involved in producing an understanding of contemporary urban dynamics and in the making of new urbanity. Scientific interest focuses on how knowledge of these phenomena is generated: through transdisciplinary inquiries across scales and scopes, and as self-organisation emerging through various sources and performances.

We ask if we have indeed entered a new phase of urbanisation and whether we are in need of a new epistemology of urban planning. What do we mean by self-organisation? What insights does it provide with regard to the challenges at hand? What kinds of challenges and possibilities will self-organisation imply, conceptually and practically, to the evolution and planning of cities? What sorts of spatial-functional phenomena, urban phase and paradigm shift are we actually dealing with? What is the role and what are the tools and strategies of statutory planning in respect of supporting self-organisation? What are the tactics used by actors and citizens to make an impact on their environment?

The issue observes the epistemology and practices of self-organisation in research articles, reviews and case presentations. Due to the writers' varying backgrounds, the term self-organisation is used in diverse ways. The user-driven phase not only redefines roles in planning, it reinterprets, even transcends, our understanding of participation. The concept of self-organisation signifies this transition. This turn requires the acquisition and promotion of new knowledge, tools and competences by the research community as well as by planners and other actors.

Background: the complexity 'turn'

In a profoundly interconnected world, city-regions are facing changes in unprecedented ways due to rapid urbanisation, technological development and environmental threats. Managing the future development with old models has become impossible. For decades, complexity sciences have provided proof that cities are complex systems – self-organising, non-linear and far-from-equilibrium (e.g. Allen 1997, Portugali 2011, de Roo et al. 2012). With cities playing a key role in the systemic transition towards more sustainable futures, calls have been made for a *new urban science* to redefine sustainability policies to include a comprehensive understanding of complexity (Acuto et al. 2018). The tasks ahead thus require rigorous cross- and transdisciplinary research efforts and policy-science integration. In Finland, the need for

such research is topical in the ongoing process of revising the statutory planning and regional governance systems. Notwithstanding the drive for extended participation and flexibility, official planning procedures continue to lag in terms of adaptive capacity. Extensive scrutiny is thus required on *the emerging cultures of cities and planning* in this ostensibly new era, on the key players and mechanisms and on efforts to interpret these findings and their implications, creating a more coherent planning theory through evolutionary practice.

Defining self-organisation

The term self-organisation is commonly used to imply 'bottom up' grassroots movements as opposed to the 'top down' institutional governing. Governance studies however separate *self-governance* from self-organisation: while self-governance refers to deliberative civic actions and citizen initiatives, self-organisation refers to non-intentional, from local initiatives and actions emergent outcomes at a larger urban scale. Self-governance means that decision-making is led by citizens and NGO actors themselves instead of a public authority. (Rauws 2016) The other interpretation comes from the complexity sciences. Natural systems are often self-organising, which means that they (re-)organise and transform without external coordination. Instead, self-organisation is guided by multiple uncoordinated interactions between a system's parts and feedback mechanisms, resulting in synchronised behaviour. Applied to social systems and urban processes, self-organisation is used metaphorically to address an orderly behaviour (or 'pattern') rising non-intentionally from multiple interactions between actors, without a common decision or plan. The term 'emergence' refers to novel system's qualities, patterns or structures, which result from self-organisation, which are not reducible to their parts. (For a comprehensive description, see Partanen & Wallin in this issue.)

Conceptual differences have significant implications for the analysis and planning strategies. The strategies for guiding self-governed urban development would include empowering actors while identifying potential synergies between actors' and city's goals. Managing self-organising urban development requires more open-ended strategies and monitoring, evaluation and learning. (Rauws 2016.)

Civic action

Self-organisation frames civic initiatives, referring to citizens' active and autonomous engagement in the production of their city, space and services. Civic activism is obviously not a new phenomenon but its history goes back to the roots of modern cities. Common to these movements is the fact that they manifested a radical counter-force and promoted political alternatives to the establishment. In Finland, a strong tradition of civic activism exists, such as workers unions, associations and communal work bees (Hautamäki 2017). The questions posed in this context have traditionally related to citizens' democratic rights and the right to the city.

The pioneering work of David Harvey, Henri Lefebvre, Michel De Certeau and Jane Jacobs has paved the way for scholarly inquiry on citizens as producers of urban space. 'Lived space', practices of everyday life and counter-cultural aspirations are implicit in the terms of contemporary urbanisms such as 'tactical urbanism' (Lydon and Garcia 2015) and 'do-it-yourself' and 'guerrilla' urbanism (Finn 2014). Similarly, the terms used for urban actors, such as 'informal actors' (Groth & Corijn 2004) and 'spontaneous volunteers' (Jalava et al. 2017), or modes of operation, including 'temporary uses' (Lehtovuori 2010, Bishop &

Williams 2012) and community-driven 'place-making' (Walljasper 2007) convey something of the spontaneity of urbanity arising from the shadow of institutions across the 4th sector (Mäenpää & Faehnle 2017). In the era of digital communication, the formation of groups is essentially faster and their action potentials wider than before. In contemporary cities, self-organisation initiatives are diverse, appearing as a topic of scholarly inquiry but with their full potential still under-utilised by the public sector.

Rethinking urban planning

This relates not only to recognising cities as complex systems but also to management potentials, calling for novel forms of urban governance and more strategic planning tools (Albrechts & Balducci 2013). Anttiroiko identifies three distinct types of planning, *technocratic, collaborative* and *self-organised urban planning,* distinguished by their integration with the official planning system and the degree of freedom and creativity involved (Anttiroiko 2016, 9). Self-organisation in this approach represents the level of greatest autonomy with regard to institutional processes (e.g. 'urban hacktivism'). From governance practices to working with self-organising groups this requires action-orientation beyond dialogue, hence learning-by-doing, experimenting, facilitating and evaluating. Co-creation and co-governance are means here to promote agility in participation processes. Furthermore, moving on to virtual environments, participation would be rethought as evolving, recursive *peer-ticipation,* interaction and learning process between actors across multiple scales and spheres on open platforms, rather than between static hierarchical levels.

An ethical approach, distributed decision-making and an extended communicative action-based orientation is common to many self-organising (or self-governing) urban planning movements. For instance, *peer-to-peer urbanism* (P2P) (Salingaros 2010) has become a joint effort between researchers and activists. According to their ethos, human environments are obtained only through the participation of all stakeholders, sharing and co-operation, empowering people to use their skills and values to plan their own environments – following the underlying idea of Christopher Alexander's pattern language (Alexander et al. 1977). P2P promotes the idea of the city as a 'commons', and a 'platform', sharing resources and alternative governance: '[T]he commons is at once a paradigm, a discourse, a set of social practices, and an ethic' (Bollier, 2016). On the other hand, new experiments in respect of the circular economy share a common ethos with P2P, engaging citizens not only as participants but as active makers of urban transition (Lehtovuori et al. 2016). Concepts like *cyclicity, circularity, connectedness* and *co-production* are the terminology of future planning, describing the dynamic and interrelated nature of urban processes. Traditional object-oriented spatial planning, which relies on top-down and linear thinking, is indeed challenged.

Lastly, digitalisation is transforming social structures and institutions empowering self-organising civic action. In the 'algorithmic age' it is not only humans but also data and nonhuman agencies that self-organise. While this turn entails the pervasive monitoring and management, depiction and simulation of urban processes, it also fosters the facilitation of new forms of digital subjectivities, citizenship, participation and political action (Kitchin & Perng 2016, 23). Social media serves not only as a platform for self-organisation but also as a source of relevant citizen data (Nummi 2017). The relationship between the 'code and the city' as well as top-down corporative smart city models demand critical social scientific examination. Are smart cities provided *for* citizens or *by* citizens? Thus we need to investigate the 'materialities', meanings and competences of emerging social (digital)

practices (Shove et al. 2012) and those digital 'code assemblages' that have become powerful mediators of our everyday life (Kitchin & Perng 2016).

Perspectives and findings

The contributions to this issue approach these topics from different disciplinary backgrounds. The texts are centred around self-organising groups and their tactics, seen through case studies reflecting on state-of-the-art practices of governance and planning. Each text provides insights worth further attention in planning research, which attempts to build a knowledge base for new cultures of cities and planning practice that not only reactively considers, but proactively harnesses, self-organisation in the attempt to build more inclusive and resilient societies.

Self-organisation occurs in multiple forms and life transactions – spatial production, housing, communication, economic activity, food production and the provision of care and justice – motivated by a shared interest in gaining competence over ´commons´ considered important for wellbeing. As a systems level issue, this also relates to the emergence of well-being and resilience at a city scale. Therefore, whether intentional or non-intentional, to what extent can self-organisation create major urban development outside formal planning agendas? How significant is the change such as to qualify as transition? And how can it be detected and harnessed?

Jenni Partanen and Sirkku Wallin approach these questions by opening up the different meanings of the concept from different research traditions. The observations by Ari Jokinen, Eveliina Asikainen and Krista Willman on urban gardening projects, and Joanna Saad-Sulonen and Liisa Horelli on the digital ecologies of communities, highlight emerging cultures of planning. These 'hybrid governance' forms in-between strategic, statutory planning and civic activism deconstruct stereotypical civic and public roles in participatory planning processes and have the potential to support self-organisation.

In a similar manner, the texts highlight the differentiating cultures of civic engagement. Planners and city officials need to learn to identify various forms and tactics of self-organisation and their differing needs and potentials in various phases of urban development. Maija Faehnle, Pasi Mäenpää, Jaakko Blomberg and Harry Schulman outline an epistemology of civic activism and the fourth sector. They have encountered a plethora of emerging social and economic phenomena, which reflect a modal change with regard to self-organisation. A common feature of many new urban groups is their fairly weak association to the establishment. Nevertheless, self-organising citizens take advantage of the city's various networks as a platform and stage, pursuing change by 'doing', breaking urban routines by surprising interventions and scaling their endeavours by collaborating with each other.

Differentiation also applies to the positioning of actors towards administration. The statements from activists Aino Rekola and Janne Kareinen, as well as the comments from Teppo Eskelinen, Sunna Kovanen and Ruby van der Wekken and the findings of Saad-Sulonen & Horelli support the notion that citizens engage in meaningful issues, which they determine themselves regardless of the opportunities provided by the public sector (see Bäcklund et al. 2017). However, activists continue to recognise the importance of the public sector as an enabler of their operations – as a provider, a 'breeding soil'. If a common motivation exists it helps actors adjust their practices (Jokinen et al.). In this context, Geoff

Mulgan (2014) has noted: 'If [innovation labs] stand too much inside the system they risk losing their radical edge, if they stand too far outside they risk having little impact.'

Reminding us of the counter-cultural origins of self-organising movements, Eeva Berglund and Vesa Peipinen argue that in spite of the narrative of diversity, the city may not be so inclusive after all. Self-organisation has been criticised for its associations with the commodification of urban space, as new grassroots projects revolving around (semi)consumeristic place-making have been embedded in cities' visions for 'smart' growth. Many movements are already synergetic with official strategies and have managed to emerge from the local level up to the policy level (ibid.; Partanen & Wallin).

In this light, Rekola and Kareinen ask how best to support the 'fertility of the soil', particularly from the point of view of inclusion and the quality of life of diverse citizens. Can activism be harnessed and scaled to the benefit of many? Research is needed on specific actions and support required at different stages of the 'adaptive cycle' of local activism (the initial conditions, growth stage, re-organisation etc.). Without sufficient digital resources the transformation would not be feasible. Saad-Sulonen & Horelli have identified this change and observed the digital artefacts mediating self-organisation. With regard to the conceptual division to self-governance and -organisation, as noted, different measures of management come into question (Rauws 2016).

Observed from a local, individual and group scale, enactment is deliberative, reflective and requires decision-making. Whereas observed from the 'upper' city scale, novel, without a 'blueprint' emerging spatial and behavioural patterns can be perceived. These, in turn, can initiate further spontaneous or planned development. For instance, DIY planning groups or 'crowdsourced' events, such as Restaurant Day or Cleaning Day, exhibit local scale intentionality but also an emergent quality accumulated from many individual uncoordinated events. They result in an action landscape where a variety of opportunities to participate and contribute constantly arise even for the less active. It is worth noting though that emergent behaviour at the 'upper' scale (or system level) is practically impossible to predict from observing actions (Rauws 2016).

Characterising self-organising groups

The *hybridity of evolving agencies* implies a mixing and combining of roles and codes. Anttiroiko (2016) states that self-organising urban planning represents a weak relation with 'official' planning. As such, many self-organised planning initiatives are not linked to formal planning processes.

The groups involved also mix the tactics of self-organisation and self-governance. In many cases the spontaneity of *ad hoc* activism is combined with a degree of strategic decision at different stages. Moreover, self-organising groups differ ideologically and have different social and economic goals, although they are often viewed homogenously. For instance, as the contributors here note, while it is possible to identify more entrepreneurial and more socially motivated civic initiatives (Eskelinen et al., Faehnle et al.), the delineations are not fixed while the boundaries between tasks, roles (e.g. producer/consumer) and spatial codes (private/public) are vague and constantly evolving.

The nature of action and codes of conduct have something in common. First, *self-sufficiency* is a factor distinguishing self-organising initiatives, as in the case of solidarity economy or

urban gardening. These are not necessarily entrepreneurial activities, even though they may support the emergence of local economies. On the contrary, action is focused on the sharing of resources as a form of reinforcing social inclusivity and wellbeing. Nevertheless, action does not occur in isolation but actors form networks (Eskelinen et al.). Collaboration adds up to scale effects, including greater visibility which would not be possible if actors operated alone. Second, all cases highlight a *self-conducting* trend, especially in relation to the public sector: groups make their own rules; the rules are situated and constantly evolving. Hence, open processes and evolving systems, negotiation and cooperation, and finding common rules and aims define the self-governance of citizen groups. A common goal is important for building trust (Rekola & Kareinen; Jokinen et al.; Eskelinen et al.).

The concept of self-organisation should not be conflated with *self-regulation* or self-determination (Deci & Ryan 2012), terms relating to the psychological competences of individuals and communities. Nonetheless, these concepts help explain the motivational resources and differences behind citizens' engagement. Personal and social assets play a major role in self-organisation. As Rekola & Kareinen note: self-motivation, -confidence and -knowledge are crucial for successful co-operation, let alone emotions.

Conclusively, balanced collaboration between the private and public sectors serves self-organisation and urban transition. It can help civic actors obtain results without losing their intrinsic vitality and integrity as a change-driving force, thus enabling the *emergence of new urban qualities*. A strategic planning interest here would thus be, how can self-organisation (potentially) result in multiple simultaneous gains, hence the emergence of multi-functionality (Jokinen et al.) and positive trajectories (Partanen & Wallin) in urban development. Digital artefact ecologies could have a major role in triggering the transition process, emergence and scalar leap from the local level to wider societal networks (Saad-Sulonen & Horelli). They make visible previously invisible urban processes by bringing citizens to the fore from the margins of power and providing useful data on our environment. Digital artefacts have a key role in managing common resources (and are a resource in themselves), making digital competences in many cases central to successful citizen empowerment.

Counter-arguments, open questions and future tasks

Many unsolved questions lie ahead. Self-organisation does not automatically result in positive outcomes, quite the contrary (Rauws 2016). Sharing resources would increase adaptive capacity and innovations, but outcomes depend upon power relations, actors' capabilities, capacities, and cultural differences. What is regarded as positive depends on the perspective. Will self-organising actors continue to be treated as marginal, while political and economic decision-making remains in the hands of institutional and corporate powers? As with planning situations more generally, it is important to be sensitive to the diversity of citizens and their multiple, even competing (or lacking) motives for participation (White 1996). The texts addressed related gaps and inefficiencies in practice as well as in knowledge creation.

Other identified problems include the legitimacy of decisions and issues related to reliability, validity and trust. An open system is vulnerable to misconduct and manipulation – despite the existence of self-correcting mechanisms. We may encounter flashbacks, a lack of competence and resistance in our reliance with smart systems. Are citizens, conceptualised as users or

also as owners and developers, entitled to improve their city, not only by providing and using data, but also by shaping the grounds of the software utilised?

Self-organisation is the underlying mechanism of resilience, the system's capacity to reorganise, recover from crisis and transform. Social-ecological resilience emphasises the adaptive capacity of communities to manage change by learning (Folke et al. 2010). Managing adaptive processes would require oscillating between control and freedom at different stages. Self-governance is needed in the management of complicated tasks in co-creative projects and co-governance with administration – in framing, facilitating, managing resources and evaluating, while the initiation and scaling phases obviously require self-organisation and emergence, implying creativity, serendipity – but also failures.

Conclusion

Representing different theoretical and pragmatic approaches and gaining insights from performative practices, the texts in this issue represent a view that advocates the co-operative mastering of urban planning. Due to many simultaneous and rapidly unfolding developments in everyday life and planning, with new agencies emerging, new reflective skills are needed to be able to co-work with human as well as technological environments. The 'algorithmic age' concerns not only human agents but interactions with, within and via the techno-sphere, calling for a better understanding of human-technology hybridisation. This can be opened out to include direct research efforts to investigate *smartness* as a conceptual frame combining many self-organising phenomena beyond the hegemonic technocratic discourse.

The field of urban civic self-organisation is still in search of coherent formulations, operating with somewhat loose and competing definitions. This conceptual ambivalence is typical of radical science. The new transdisciplinary knowledge emerges bottom up as 'co-evolving knowledge' from researchers and actors alike, along with the emergent patterns that we face in our changing urban landscape. Despite the decades spent by researchers and planners alike, building a solid theoretical base, much work remains to be done in the construction of new scientific knowledge and the applications required to redefine cities and planning in the 'complexity age'. Whoever ventures to dig deeper into the unstudied territories of complexity, self-organisation and emergence, and hence, to challenge current pathologies in planning and socio-technical development, also has a lot to gain, as the momentum is now.

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References

Acuto, M., Parnell, S. & Seto, K.C. (2018). Building a global urban science. Nature Sustainability 1:1, 2–4. doi:10.1038/s41893-017-0013-9

Alexander, C., Ishikawa, S., & Silverstein, M. (1977). A pattern language: Towns, buildings, constructions. Oxford University Press, New York.

Allen, P. M. (1997). Cities and regions as self-organizing systems: Models of complexity. Gordon and Breach, Amsterdam.

Albrechts, L. & Balducci, A. (2013). Practicing strategic planning: in search of critical features to explain the strategic character of plans. disP-The Planning Review 49:3, 16-27.

Anttiroiko, A-V. (2016). City-as-a-Platform: The rise of participatory innovation platforms in Finnish cities. Sustainability 8:9, 922. doi:10.3390/su8090922

Bishop, P. & Williams, L. (2012). The temporary city. Routlege, London.

Bollier, D. (2016). Commoning as a Transformative Social Paradigm. The Next Systems Project. [retrieved October 2017] <http://thenextsystem.org/commoning-as-a-transformative-social-paradigm>

Bäcklund, P., Häkli, J. & Schulman, H (eds.) (2017). Kansalaiset kaupunkia kehittämässä. Tampere University Press.

Deci, E. L. & Ryan, R. M. (2012). Motivation, personality, and development within embedded social contexts: An overview of self-determination theory. In Ryan, R. M. (Ed.): Oxford handbook of human motivation, pp. 85-107. Oxford University Press, Oxford, UK.

Finn, D. (2014). Introduction to the special issue on DIY Urbanism. Journal of Urbanism: International Research on Placemaking and Urban Sustainability 7:4, 331–332.

Folke, C., S.R. Carpenter, B. Walker, M. Scheffer, T. Chapin & J. Rockström (2010). Resilience thinking: integrating resilience, adaptability and transformability. Ecology and Society 15:4, 20.

Groth, J. & Corijn, E. (2004). Reclaiming Urbanity: Indeterminate Spaces, Informal Actors and Urban Agenda Setting. Urban Studies 42:3, 503–526.

Hautamäki, A. (2017). Uusi universalismi perustuu yhteisiin voimavaroihin. Blog post 27.11.2017. [retrieved November 2017] < http://anthauta.blogspot.fi>

Jalava, J., Raisio, H., Norri-Sederholm, T., Lahtinen, H. & Puustinen, A. (2017). Kolmas sektori viranomaisten turvallisuustoiminnan tukena. Valtioneuvoston selvitys- ja tutkimustoiminnan julkaisusarja 76/2017.

Kitchin, R. & Perng, S-Y. (2016). Code and the city: Introduction. In Kitchin, R. & S-Y. Perng (eds.): Code and the city. Routledge.

Lehtovuori, P. (2010). Experience and conflict: The production of urban space. Routledge.

Lehtovuori, P., Edelman, H., Rintala, J., Jokinen, A., Rantanen, A., Särkilahti, M. & Joensuu, T. (2016). Development vision for Hiedanranta: Densely-built and intensively green Tampere City West. Tampere University of Technology. School of Architecture. Publication Vol. 11.

Lydon, Mike & Garcia, Andy (2015). A Tactical Urbanism How-To. In Lydon, Mike & Andy Garcia (eds.): Tactical Urbanism, 171-208. Island Press/Center for Resource Economics, Washington.

Mulgan, G. (2014). The radical's dilemma: an overview of the practice and prospects of Social and Public Labs (Version 1). [retrieved November 2017]<http://www.nesta.org.uk/sites/default/files/social_and_public_labs_-_and_the_radicals_dilemma.pdf>

Mäenpää, P. & Faehnle, M. (2017). Civic activism as a resource for cities. Helsinki Quarterly 1/2017, 68-81.

Nummi, P. (2017). Social Media Data Analysis in Urban e-Planning. International Journal of E-Plannig Research 6:4, 18-31.

Portugali, J. (2011). Complexity, cognition and the city. Springer, Berlin/Heidelberg.

Rauws, W. (2016). Civic initiatives in urban development: self-governance versus self-organisation in planning practice. Town Planning Review 87:3. doi: 10.3828/tpr.2016.23

de Roo, G., Hillier, J. & van Wezemael, J. (eds.) (2012). Complexity and Planning: Systems, Assemblages and Simulations. New Directions in Planning Theory. Ashgate, Farnham.

Salingaros, N. A. (2010). P2P urbanism (draft version 3.0). [retrieved October 2017 <http://zeta.math.utsa.edu/~yxk833/P2PURBANISM.pdf>

Shove, E., Pantzar, M. & Watson, M. (2012). The dynamics of social practices. Everyday life and how it changes. Sage.

Walljasper, J. (2007). The great neighborhood book: A do-it-yourself guide to placemaking. New society publishers.

White, S. C. (1996). Depoliticising development: the uses and abuses of participation. Development in practice, 6:1, 6-15.