

ADVANTAGES OF SELF-ORGANISATION IN URBAN PLANNING – LOCAL LESSONS OF URBAN DEVELOPMENT IN HELSINKI METROPOLITAN REGION

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Jane Jacobs asked already in 1961: What kind of problem is problem in organised complexity. However, in complexity theory thinking, the problems caused by organisation represent just one type, other types are simple problems and problems of disorganised complexity. Methods of different types of complexity differ from one another. Organizing urban planning, and the contest between local development and regional ones. Action research is a way to conduct studies on urban complexity. It provided methodology not only to collect data, but also to analyze it from the perspective of stakeholders in the Herttoniemi neighbourhood of Finland. The paper will answer three questions: What is urban complexity? What is the role of citizen activism in complex urban development? How can complexity be turned into an advantage in urban planning?

Key words: Urban complexity, self-organization, action research

1. Introduction

The objective of urban planning has been to plan and design well-functioning urban environments. However, many urban problems are complicating this task (Christaller, 1933; Bettencourt and al., 2007) and the expanding scope and scale of problems have turned the latter into 'wicked' ones. Wicked problems are intricate by nature comprising several environmental and societal issues at the same time (Skaburskis, 2008; Weber and Khademian, 2008). There has been two ways to respond to wicked problems in urban planning. The first one has focused on the substance of planning, aiming at a better physical appearance and performance of urban functions. The second one has laid emphasis on the procedure; processes, their actors and the stages of planning.

Unfortunately, the analysis of the current urban development of the Helsinki Metropolitan Region reveals severe defects in the application of both approaches. I will reflect in the following on the development of a Helsinki neighbourhood called Herttoniemi. As one of the oldest suburbs of the capital city, with a central location and good accessibility, it has followed the urban transformation of the Metropolitan Region and faced the problems and promises of urbanization: shortage of housing, required urban densification, and belt-tightening of public expenses which have transformed the neighbourhood. The population has increased up to 53 000 inhabitants during the

past ten years, and the change will continue (Statistical Districts, 2014; Helsinki City Plan Draft, 2015). Herttoniemi can be regarded as the mirror of urban development in the Helsinki region in which the internal and external push and pull factors take turns, enabling and constraining one another.

Herttoniemi provides a rich context for studying urban complexity. For example, the idea of enhancing sustainable urban development through densification and a compact urban structure has become an accepted norm in urban planning. It is assumed to provide better services nearby and therefore less traffic. However, densification has not led to a more sustainable environment in Herttoniemi, because service policies are not following housing policies. The former service structure developed in 1950s is being replaced by the structure of 2010s in which services are concentrated in large scale units that are shared by several neighbourhoods. Services that used to be designed for 5000 or 10 000 inhabitants are now produced for 50 000-100 000 units of inhabitants. This has become tangible already in health and child care services. The former is an important daily service for elderly people and the latter for young families. The hospital of Herttoniemi was put down already in 2014. The health station will move to another neighbourhood, Kalasatama, in two years. Accessibility of the daily services is related to the mobility and consumption patterns (Heinonen, 2012), which together are increasingly burdening the ecosystem as an increasing number of inhabitants is trying find services.

At the same time, it has become ever more difficult for citizens to shape their own living environment and daily life. According to service surveys (Häkkinen and Wallin, 2005; Jarenko, 2007), as well as heated debates in local newspapers, the inhabitants are not willing to give up their local public services. Neither are they willing to have more neighbors especially, if it reduces the green space and recreational areas (for example the Kivinokka area). However, the aspirations of citizens are not reflected in the administrative and decision-making system. Even if public participation is endorsed by legislation, the statutory measures in urban planning are limited to the specific phases of the planning or zoning process. At the same time, the role of citizens is very small in social and health policies, as they are steered by other type of legislation, detached from urban policies. As the Metropolitan and City administration has not mobilised local people, these have adopted other coping mechanisms to design and produce their everyday urban functions.

The aim of this paper is to analyse the role of self-organising citizen activism in the urban planning and development of Herttoniemi. The paper is based on action research and longitudinal data gathering during 2004-2012 (Wallin and Horelli, 2010; Saad-Sulonen and Horelli, 2010; Wallin and Horelli, 2012; Wallin, 2015). The paper asks and answers three questions: What is urban complexity? What is the role of citizen activism in complex urban development? How can complexity be acknowledged and turned into an advantage in urban planning? The paper sheds light on action research as a method in urban planning as well as the local patterns of urban development.

2. Three types of urban complexities

The city has been described in urban planning research with diverse concepts. In the era of modernism, rational planning conceived the city as a machine. It was an engine, produced by design and steered by administrative systems. The machine was a source of livelihood that promised a society where global economic and political domination was possible (Faludi 1973; Porter, 2011). In the post-modern era, cities have prevailed their role, but the concept of urban planning and development has changed. Due to urban growth, social segregation and economic differences, cities look more like a self-organising organism than a disciplined machine (Taylor, 1998; Urry, 2003).

Jane Jacobs asked already in 1961, in her book *Death and Life of a Great American City*: “*What kind of a problem is a city?*” She answered that: “*A city is a problem in “organised complexity”*”. In complexity theories based on systems thinking, the problems caused by organising represent just one type of complexity. The two other types are simple problems and problems of disorganised complexity (Baynes, 2009). The management methods of different complexity types vary from one another. According to Baynes (2009, 215), “*The basic assumption behind simple problems and disorganised complex problems is that the system being described seeks equilibrium and that this can essentially be approached with reductionist, deterministic methods*”.

In this paper, simple complexity is a problem, which can be solved. At least, it can be split into units that can be detangled and therefore solved. Simple complexity is not about simplicity. Quite the contrary, it can also be intellectually a highly demanding problem. Traditional engineering questions seek to answer these issues. Examples of solving methods are life-cycle thinking and efficiency consumption calculations that are used in the planning of urban structures and functions.

Problems emerging from disorganised complexity are difficult to perceive and comprehend, as they take place in changing situations, contexts and logics. They have to be studied by applying advanced statistical analyses and modelling. Methods like forecasting and evaluation, are common in the field of economics and policy studies, but these are also being applied in urban development issues, such as demographic change (Baynes, 2009). Disorganised complexity cannot be solved as such, but it can be examined and anticipated which provides solutions for adoption and adaptation.

Organised complexity differs from the other types of urban complexity. Baynes (2009, 215) claims that “*The problems of organised complexity are characterized by heterogeneity, coherent local interactions, irreducibility, and persistent disequilibrium. Deterministic approaches and statistics cannot adequately represent the diversity or importance of interactions and dynamics that lead to aggregate observations in organised complex systems*”.

Organised complexity is a meshwork of formally acknowledged organising, apparently rationally-led and well-steered but, when implemented in practice, they often end up in a ridged, competitive and overlapping system of administration that triggers wicked urban problems. Splitting them into smaller units does not solve the consequences of organised complexity, but this might even worsen

it. In addition, the mere description of the complexity is not enough, since the causes of the problem are known even without new research. The resolution lies in deliberation and social reconciliation, new models of governance and practical innovations that take over current systems and practices. However, they are seldom plausible. New technology or political decision might be "a juggernaut of destruction", a new layer on the prior mess, which makes the situation even more complicated (Urry, 2005).

Consequently, the different types of complexity affect the scope of urban planning, the understanding of what urban planning is and the means that can be used to resolve wicked problems. Administrative and resolution devices that are based on the deterministic approach have limited impact on urban planning. Knowledge production that is based on the causalities of phenomena and quantitative methods, such as technical and economic statistics, falls quickly into a cul-de-sac in the changing context (Fainstean, 2001).

Also a lack of capacity prevails concerning the understanding of organised complexity in urban planning processes. According to research on participatory urban planning, the participants – local actors, inhabitants, entrepreneurs and different service provider communities – have not been sufficiently integrated in urban planning (Innes and Booher, 2010; Staffans, 2004; Bäcklund, 2007). Several approaches have been created to involve the public and to mediate uprising conflicts, but so far no successful integration of procedural and content theories of urban planning exists. Manzo and Perkins (2006, 341) claim that "*While this process may indeed require special management techniques, it has an uncovering of place meanings and values at its core*". This means that inhabitants' place-based knowledge has not been sufficiently acknowledged in urban planning. Participatory urban planning should mobilize people to bring their own history, the assets of their social relations and dreams of a better future to the content and substance of planning.

Versatile methodological competence is part of a larger capacity to understand urban complexity and to resolve wicked problems. At the same time, it makes urban planning more transparent and more fit for purpose (Wallin and Horelli, 2009). The faculty to combine knowledge, produced through traditional quantitative methods with qualitative knowledge and modelling, enriches urban planning and decision making (Anttiroiko, 2012). The key is new knowledge sources, such as the place-based knowledge of inhabitants and other real-time urban informatics (Batty, 2013). Novel data and its application enrich the planning material and enable the understanding and anticipation of complexities (Horelli and Wallin, 2010). The expansion of data produced by the civil society increases the participation of residents and new groups – both in the process and substance of urban planning.

The systemic¹ gathering, and systematic use of planning information, can make the planning system more transparent, reflective and agile than it is today. In practice, this means the adoption of new approaches and new methods, not only during the on-going planning process, but before

¹ Systemic refers here to the systems approach, which means the comprehension of isolated systems as affecting one another and making a whole or a system. (Hummelbrunner & Reynolds, 2010; Reynolds & Holwell, 2010).

the actual planning begins. These contribute to the planning objectives, but also to the implementation of the plans, when the ex-post evaluation of the urban setting takes place. Thus, they produce planning information for initiatives of linear procedure, but also for those of visionary or even disrupted future (Figure 1. Horelli and Wallin, 2010).

The next section seeks to justify Jane Jacobs' claim about urban complexity. The claim is still valid in Herttoniemi, a Finnish neighbourhood of 45.000 residents, although Jacobs made it 50 years ago in New York. The section comprises an analysis of urban complexity at the neighbourhood level, which was perceived, explained and partly resolved by action research on urban planning and community development.

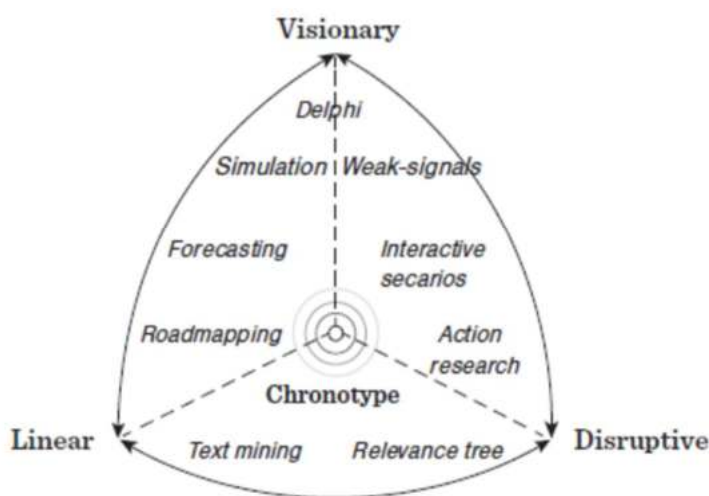


Figure 1. Examples of urban planning methods suitable for resolving different types of urban complexities (adapted with permission from Aaltonen, 2007 in Horelli and Wallin, 2010).

3. Research on self-organising urban planning and development

Action research is one way to conduct studies on urban change in a systemic way. Action research is an established research approach in social and behavioural studies (Lewin, 1946; Kuula, 1999). Action research is a strategy in which the researcher, together with the subjects in the study, implement various interventions². These comprise simultaneous observation, monitoring and analyses. The process is transparent and co-evolves with the context. Systemic refers here to a trans-disciplinary approach in which, besides the structural and temporal transformation of the context, also the different agents and their rationalities are recognised as part of urban planning interventions.

² The dual role of the researcher, the so called 'sitting on two chairs', poses a dilemma as the research is simultaneously an explanatory and transformatory factor in terms of the research object (Alasuutari, 1993).

In the action research on Herttoniemi, urban planning and community development interventions were entwined in order to study the different actors and their activities in the neighbourhood. The adapted action research approach was called LENA, *A Learning-based network approach to urban planning and action research*. LENA expanded formal urban planning that traditionally deals with specific zoning and building projects to comprise multi-stakeholder processes. It transcended administrative and areal borders and explored new ways to gather inhabitants' place-based knowledge.

In the light of the action research, the neighbourhood is no longer seen as an object of the town fathers or professional town planners. Herttoniemi unfolded as a self-organising, co-evolving system in which all actors had some meaning, even if the roles were not similar or comparable (Boolens and Boonstra, 2011). The prior actors had been officials, land owners and construction companies, who wanted to engage local actors in planning, but only in the role of the end user. The self-organization in urban planning means that residents, civil society organisations and the workers of local associations, even passive actors who do not come to planning events and gatherings, carry weight in terms of shaping the environment. The urban transformation can take place by conscious, self-made development interventions or just by having an impact on the setting through everyday practices, such as walking (Kuoppa, 2013). Not only active involvement in a workshop or writing a statement, but even the chosen route or service, and a lived moment can be part of the evolving urban texture.

This kind of urban development might seem chaotic, when diverse interventions and research are simultaneously taken forward. However, in practice it is clear that the redesigning of the location of children's afternoon care, building of a community yard and the changing of local bus routes are tasks for urban planning, yet initiated and completed by others than urban planners. These acts together make the neighbourhood a better place to live. The co-planning, timing and taking forward of the locally identified activities through action research enabled the description and even certain steering of the transformations in the neighbourhood.

4. Urban complexity in Herttoniemi: simple solutions and the identification of non-solvable challenges

The neighbourhood of Herttoniemi has been a functional part of Helsinki since the 1950s. Industrial activities found their place there, and offered to the whole city harbour and warehouse services. Right after the Second World War Herttoniemi turned into one of Finland's first suburbs, which attracted people who wanted better housing conditions. Thus, Herttoniemi became a classic neighbourhood unit that provided its inhabitants all public and commercial services in addition to work places. Gradually its identity as a neighbourhood got stronger. It was divided into two residential areas: West-Herttoniemi and Roihuvuori, which were separated from one another by an industrial and harbour area, and later by the eastern motorway and the Metrorail towards East-Helsinki and the South-East Region (Packalén, 2008).

By the beginning of the Third Millennium the urban structure of Herttoniemi is decisively different from the Post-War one. In practice, the neighbourhood has been rebuilt in terms of its functions, population, image and position in the central hierarchy of the metropolitan area. Herttoniemi has always been the transport node of South-East Helsinki. Consequently, it is scaling up to a new level, while it is simultaneously being internally changed. Once a labour-class neighbourhood has now become a concentration of green urban activists. Its architecture underlines the change, as the point-access block houses and slab blocks are being complemented by new buildings of latest architecture. A completely new neighbourhood, called Kruunuvuorenranta, is being built South-East of Herttoniemi.

Urban functions have changed even more drastically. The old suburban structure is dissolving. The former harbor area has been replaced by a new high density housing area, called Herttoniemenranta. Its services are provided around the metro station, and the former industrial area has evolved into an office and retail district. The old shopping centres in the West-Herttoniemi and Roihuvuori have been emptied of commercial services, except for small grocery stores. All the public services, such as the library, youth house and the local parish have been suggested to move to the commercial centre around the metro or even further to the city center or to other neighbourhoods, such as Kalasatama.

The above described factors have transformed the urban landscape and the role of Herttoniemi in the region. The original aim of action research was to examine this transformation and to find out, how to support people's everyday life and opportunities to participate in urban planning. The action research comprised several distinctive development projects with different foci.

In each phase, data was gathered from the area. Two large surveys covering the residents of the neighbourhood, as well as focus group and individual interviews were conducted, in addition to observing the meetings of administrators and associations in Herttoniemi. The objective of the data gathering was twofold: first of all, to collect views of different actors concerning the ways to develop the neighbourhood and to disseminate information for deliberation. Secondly, the data enabled the monitoring of the evolving context. The planning solutions and interventions have been described in several PALCO-publications (<https://wiki.aalto.fi/display/Palco/Publications>).

The planning targets and needs that came up during the action research have been gathered in Table 1. They have been analysed from the perspective of urban complexity and the role that participation had in the problem solving.

Table 1. Urban complexity recognised by action research at the neighbourhood level.

Problems of urban complexity	Target of planning/action research	Role of participation
Simple problems	New timetables and routes for the bus, common yards, local websites	<p>Speeded up the finding of problems and their solutions</p> <p>Enabled the implementation of solutions even through the means of co-production</p> <p>Increased the fit of the solution and its sustainability</p>
Problems of disorganised complexity	Uncertainty brought about by a multitude of service providers and a lack of planning data, such as childcare in the afternoon and the mobility for hobbies of young people	<p>Produced information about phenomena, events and trends that cannot be found in statistics or via surveys to particular groups</p> <p>Enabled the comprehension and deliberation of different perspectives</p>
Problems of organized complexity	The chaos brought forth by different administrative systems, their varying 'temporal windows', and the evolving context in general, for example the raising of real rents and the urban development of the new Herttoniemi Centre.	<p>Brought forth new active user groups as producers of planning knowledge – some of which might change the future direction</p> <p>Enabled the use of digital data (e-planning) and time planning for foresight and anticipation, providing opportunities to envision solutions in the changing urban context</p>

From the perspective of urban complexity, described at the beginning of this paper, the first result was the recognition of the disorganised complexity of the neighbourhood (see Table 1.).

The action research took place in collaboration with the Department of Urban Planning and the Social Department of the City of Helsinki. The former was interested in Herttoniemi due to the need to find novel places for housing, as well as due to the many zoning and transport projects in the new centre of Herttoniemi, which was the consequence of the future Kruunuvuori neighbourhood. The Social department of Helsinki was worried about the lacking services of the 20.000 residents in Herttoniemenranta. They had not been built due to the financial recession in early 1990s. The Social Department also lacked local data on services. The social services were planned at that time according to age groups for the whole city in general and no longer according to local needs, as before. The principle meant, for example that the services of members in the same family were planned in different administrative units. The problems of children did not relate

to the problems of their parents, even if their connection was indisputable. This also hid the fact that social problems were concentrated in certain neighbourhoods, even in particular blocks.

Despite officials, there were many activists in the area, who had resources and the motivation to organise services or to take part in the planning and financing of spaces in the neighbourhood. These were members of local associations or private service providers, who offer spaces for activities. The neighbourhood had also traditional residential activities among better off people who lived in the owner occupied area. The new residents of Herttoniemenranta and the tenants of social housing did not participate in the residential activities. The ways and instruments to increase social interaction were scarce, especially between the residents in different parts of the neighbourhood. The surveys disclosed that even if the different residential groups appreciated the neighbourhood for the same reasons, they could not find shared goals, except for the need of a public swimming pool. The location of the services became a conflict between the different subareas, especially as the newest one was almost totally without services. On the other hand, the centralisation of services around the metro station worsened the services of West-Herttoniemi, known for its activism. These were examples of problems in disorganised complexity that cannot be solved as such. However, they can be described which means that they can be divided into smaller controllable units (Table 1.).

These smaller units were not easy problems but it was possible to solve them. The simple complexities, which were separately solved, were found through surveys and participatory observation. Some of the solutions were strategic, such as the creation of participatory arenas and instruments for local co-governance and the founding of the local websites. Others were operative, for example, the hiring of a community worker. All of them were ground stones for the participatory structures that enabled residents to resolve the provision of child care in the afternoon based on different partnership models, to reconfigure the transportation system and to plan, build and turn the unsafe area of Roihuvuori into a multi-generational community yard (Saad-Sulonen and Horelli, 2010; Wallin and Horelli, 2010; Wallin, 2015).

Participatory planning proved to be essential for dealing with ‘simple urban complexity’. The precondition for solving the complexity was the collaboration between the residents, associations, entrepreneurs and the administrators. The solution turned out to be successful, if the official responsible for the planning collaborated with the service provider and the users. The transition from participatory planning to participatory co-production speeded up and enabled a satisfactory outcome, for example, in the case of the Roihuvuori yard.

Participatory planning was also fundamental in the controlling of disorganised complexity. The participatory means produced new knowledge about the current and future situation of the neighbourhood. Besides statistics and expert surveys, a variety of co-planning methods was applied, ranging from informal events to structured workshops and charrettes. Thus, it was possible to approach the complex situation from different perspectives, to plumb the background of problems and to find common denominators, which made it easier than before to understand varying causal relationships. Although complexity as such was not decreased, the Lena approach

of the action research enhanced the finding and creation of shared means and arenas for the neighbourhood actors, which in turn, enabled to make complex, even conflicting issues visible.

The recognition of the two types of complexity did not, however, solve all the challenges of the Herttoniemi neighbourhood. The solving of specific planning problems, or revealing different perspectives and creating shared understanding, are not enough to bring responses to the situation that will emerge from the unknown future of the larger contextual transformations. The disruptive future cannot be completely coped with, even if the anticipation of and preparation for changes are the purpose of different administrative departments, especially that of the Department of Urban Planning.

In Herttoniemi, the administrative and decision-making machinery was not capable of controlling the urban organism, especially as the timescale seemed to extend to years or decades. Thus, the planning system and city government could not steer, not even together with the neighbourhood activists or associations, the most important activities and events related to urban spaces.

One example of organised complexity that is difficult to steer, was the raise of real estate taxes. The city decided to triple the rent of the old housing areas, although these needed desperately renovation. This, in turn, increased the dwelling costs to a level that was unbearable, at a time when housing and living had become extremely costly in the metropolitan region in general. The raised rent endangered the possibilities of the residents and real estate owners to maintain their houses and even to live there. On the one hand, not increasing the rent was inconceivable. Old rental agreements were ending and new ones had to be made. According to legislation and good governance, lower rents were not possible due to the equality of citizens.

Another, similar problem of organised complexity was the structural and functional challenge of Herttoniemi. It is 10 years, since the statutory plan of Herttoniemi metro station was made, but its implementation has not yet begun. The old suburban structure dissolves and services escape from housing units, not only to the metro station, but even further away from the everyday life of the residents. It is impossible to prevent the development during the times of current economic priorities. Services will be produced less expensively to larger groups of people, which means that the services will no longer be situated in the near environments of residents, like before. Urban planning fails to guarantee the benefits of urban densification due to the policies of other administrative sectors.

How should urban planning relate to organised complexity that is emerging from the established administrative and planning practices, especially if the challenges cannot be solved through planning? The action research on Herttoniemi discloses that urban planning should be seen both as techno-rational problem solving and as part of a larger understanding and anticipation of the socio-political development of society.

It is not suggested, that action research should be applied as a planning device. However, urban planning could profit from the applied methods and the understanding of the meaning of

participatory planning in different planning cases. With the aid of multiple methods and sufficiently long term research, it is possible to understand the neighbourhood and to solve its challenges. Expanded urban knowledge that participation brings forth might enable the anticipation of the future and the understanding of plausible continuities or loose trends which organised complexity will be made of.

In sum, the new approaches to urban planning, which are based on localities and local actors instead of administrative sectors, can identify and split different types of complex urban problems and resolve many of them. This is, in fact, what urban planning has always been about. However, the contribution of the approach presented here implies that the limits of planning have to be understood. The city is a living organism, a co-evolving adaptive system that transforms space and time. The steering through straight forward urban planning processes do not work in each case. The contributions of incremental and rationalistic planning approaches have to be understood with their limitations in the context of the changing, multi-actor and even disruptive urban reality in which planning takes place.

5. Conclusions

This paper has described urban complexity in Herttoniemi from the perspective of action research at the neighbourhood level. It has asked and answered three questions, concerning what urban complexity means, how one can be prepared for it in urban planning and what the role of public participation is in the complex urban development. Consequently, all of them are also relevant in urban development and policy-making at the metropolitan level.

The action research described here supports the outcomes of classic studies on urban planning. Complexity is an urban characteristic that emerges as a result of different activities, polymorphous structures and varying features of different people. In addition, both internal and external pressure affects the changing context. The pressure comprises, among others, urbanisation and the increase of population, the technological change and the transformation of everyday life. Worth naming are the new consumption patterns, the changing governance style and the rise of self-organisation, as well as the events and networks in different spatio-temporal dimensions which can be examined in the context of urban planning. So, what are the lessons?

The first lesson concerns the comprehension of complexity in urban planning. It means that instead of turning the watchful eye of planning and governance to future urban structures and fragmented planning processes, it should be turned to the ways people live, especially to the curbing of consumption and mobility and to the development of the existing urban structure and its functions. The objective of planning interest should thus be human communities, not the implementation of specific activities or certain urban structures.

In the light of systems-based urban research and the action research on participatory planning in Herttoniemi it can be claimed that it is possible to solve wicked urban problems, if the understanding of urban functions takes place locally, comprising the acknowledgement of the

special characteristics of local actors. The local perspective is frequently missing in the metropolitan context.

Secondly, it is important to understand that the urban planning solves best simple problems. These are well- defined, often techno-rational planning objects and single cases in which building or reorganisation can change the neighbourhood and consequently improve the inhabitants' daily lives. The action research indicated that participatory planning and even co-production can have a significant role in this respect. Collaboration with local actors succeeded in implementing some construction projects (the common yard of Roihuvuori) and in organising participatory structures for deliberation (Local committee and Herttoniemi website).

In order to be able to solve simple problems, they have to be distinguished from the group of situations and systems that represent disorganised and organised complexity. This is where urban planning can contribute by producing diverse planning information. The knowledge creation in urban planning can support other sectors of administration, as long as it is based on high quality knowledge production. This means in practice that traditional data gathering modes, such as statistics and surveys, are complemented by data and methods of urban informatics comprising e-planning instruments and new deliberative models of action which engage self-organised resident activism.

The third lesson is that, due to a multitude of planning information about the complex situation, it is possible to distinguish the different types of complexity-related problems, but not always to resolve them. Sufficient knowledge production can make urban complexity understandable. It is also possible to distinguish simple problems whose solving might decrease disorganisation. However, it becomes clear which issues are caused by organised complexity. Neither urban planning, nor the means of participatory planning, can manage this type of complexity. Yet, the anticipatory knowledge production illustrates the situation for all parties. Thus, it is possible to change the urban policies and to affect the causes of organised complexity in the future.

In sum, the City is not only a problem in organised complexity, as Jane Jacobs claimed many years ago, but that of different types of complexity. It is not possible to solve all forms of complexity, but it is evident that the planning policy in Finland and the production of planning should be renovated by increasing the recognition of new urban knowledge brought about by participatory planning, urban informatics and the self- organisation of citizens. Currently, this is not the case in the Helsinki Metropolitan Region.

References

- Aaltonen, M., 2007. *The Third Lens. Multi-ontology Sense-making and Strategic Decision-making*. Ashgate:Aldershot.
- Allmendinger, P. and Haughton, G., 2010. Spatial planning, devolution, and new planning spaces. *Journal of Environment and Planning C*, 28, pp. 803–818.

- Alasutari, P., 2003. Laadullinen tutkimus. Tampere: Vastapaino
- Anttiroiko, A.-V., 2012. Urban Planning 2.0. *International Journal of E-Planning Research*, 1(1), pp.16–30.
- Batty, M., 2013. Big data, smart cities and city planning. *Dialogues in Human Geography*, 3(3), pp. 274–279
- Baynes, T., 2009. Complexity in Urban Development and Management Historical Overview and Opportunities. *Journal of Industrial Ecology*, 13(2), pp. 214–227.
- Bettencourt, L., Lobo, J., Helbing, D., Kuhnert, C. and West, G.B., 2007. Growth, innovation, scaling, and the pace of life in cities. *Proceedings of the National Academy of Science*, 104(17), pp. 7301–7306. [online] Available at: < <http://www3.unifr.ch/econophysics/papers/topic/%205224125913> > [Accessed 7 May 2015].
- Boonstra, B. and Boelens, L., 2011. Self-organization in urban development: towards a new perspective on spatial planning. *Urban Research and Practice*, 4 (2), pp. 99–122.
- Bäcklund, P., 2007. Tietämisen politiikka – Kokemuksellinen tieto kunnan hallinnassa (Politics of Knowing). *City of Helsinki Urban Facts*. Helsinki: Yliopistopaino.
- Christaller, W., 1933. *Die zentralen Orte in Süddeutschland*. Jena: Gustav Fischer. Translated in C.W. Baskin, ed. 1966. *Central Places in Southern Germany*. New Jersey: Prentice Hall.
- City of Helsinki Urban Facts 2014. *Statistical Districts 2014*. [online] Available at: <http://www.hel.fi/hel2/tietokeskus/julkaisut/pdf/15_02_23_Hki_alueittain2014_verkko.pdf > [Accessed 7 May 2015].
- Fainstein, S., 2001. *City Builders: Property Development in New York and London, 1980–2000*. Lawrence: University Press of Kansas.
- Faludi, A., ed. 1973. *A reader in planning theory*. Oxford: Pergamon Press.
- Heinonen, J., 2012. The impacts of urban structure and the related consumption patterns on the carbon emissions of an average consumer. Aalto University publication series. Helsinki: Unigrafia Oy.
- Helsinki City Plan Draft, 2015. *Urban Plan*. Helsinki plans, 2015:1. [online] Available at: http://www.hel.fi/hel2/ksv/julkaisut/esitteet/esite_2015-1_en.pdf > [Accessed 7 May 2015].
- Henckel, B. Könecke, S. Stabilini, S. Thomaier and R. Zedda, eds. *Space Time Design of the Public City*. Hamburg: Springer Publishers.
- Horelli, L., 2002. A Methodology of Participatory Planning. In R. Bechtel and A. Churchman, eds. *Handbook of Environmental Psychology*. New York: John Wiley, pp. 607–628.
- Horelli, L. and Vepsä, K., 1994. In Search of Supportive Structures for Everyday Life. In I. Altman and A. Churchman, eds. *Women and the Environment. Human Behavior and Environment*. New York: Plenum, pp. 201–206
- Hummelbrunner, R and Reynolds, M., 2010. Systems thinking for enhancing evaluation practice. *Workbook and Background Reading*. Pre-Conference professional Development Session. European Evaluation Society. 5 October, Prague.
- Häkkinen, T. and Wallin, S., 2004. Herttoniemen turvallisuus- ja viihtyisyys-kyselytutkimuksen tulokset (Results of the Safety Survey in Herttoniemi) A Report of the ARJA Project. Centre for Urban and Regional Studies. Espoo: Helsinki University of Technology.
- Innes, J. and Booher, E., 2010. *Planning with complexity: Introduction to the collaborative rationality of public policy*. New York: Routledge.
- Jacobs, J. 1961. *Death and Life of Great American Cities*. New York: Random House.
- Jarenko, K., 2007. Herttoniemen elinympäristön viihtyisyys ja palvelut-kyselyn tulokset. (Results of the Local Service Survey in Herttoniemi) A Report of the ARJA Project. Centre for Urban and Regional Studies. Espoo: Helsinki University of Technology.
- Kortteinen, M., Lankinen, M. and Vaattovaara, M. 1999. Pääkaupunkiseudun kehitys 1990-luvulla: kohti uudenlaista eriytymistä. (Development of the Helsinki Metropolitan Region in the 1990's). *Yhteiskuntapolitiikka*, 64(5–6), pp. 411–422.
- Kortteinen, M. and Vaattovaara, M. 2007. Miten Helsingin käykään? (What is the fate of Helsinki?). *Yhteiskuntapolitiikka*, 72(2), pp. 137–145.
- Kuoppa, J., 2013. Beyond vague promises of liveability: an exploration of walking in everyday life. In D

- Kuula, A., 1999. Toimintatutkimus – Kenttätöitä ja muutospyrkimyksiä (Action Research – Field Work and Efforts for Development). Tampere: Vastapaino.
- Lewin, K., 1946. Action research and minority problems. *Journal of Social Issues*, 2, pp. 34–36.
- Manzo, L.C. and Perkins, D.D., 2006. Finding Common Ground: The Importance of Place Attachment to Community Participation and Planning. *Journal of Planning Literature*, 20 (33), pp. 336–350.
- Packalén, E., 2008. Herttoniemi. Kylä, kartano, kaupunginosa. (Herttoniemi as and a neighbourhood. Helsingin kaupunginmuseon tutkimuksia ja raportteja, 2. Keuruu: Otava.
- Porter, M.E., 2011. Competitive advantage of inner city. In R.T. LeGates & F. Stout, eds. *City Reader, Urban Reader Serie*. New York: Routledge. pp. 282–295..
- Reynolds, M. and Holwell, S., eds. 2009. *Systems Approaches to Managing Change A Practical Guide*. London: Springer.
- Saad-Sulonen, J. and Horelli, L., 2010. The value of Community Informatics to participatory urban planning and design: a case-study in Helsinki. *The Journal of Community Informatics*, 6(2). [online] Available at: < <http://ci-journal.net/index.php/ciej/article/view/%20579/603> > [Accessed 7 May 2015].
- Skaburskis, A., 2008. The Origins of "Wicked Problems". *Urban Theory and Practice*, 9(2), pp. 277–280.
- Staffans, A., 2004. Vaikuttavat asukkaat: vuorovaikutus ja paikallinen tieto kaupunkisuunnittelun haasteina (The Influential residents – collaboration and local knowledge as a challenge in urban planning). Dissertation, A Publication Serie of the Centre for Urban and Regional Studies, 29. Espoo: Helsinki University of Technology.
- Taylor, N., 1998. *Urban Planning Theory since 1945*. London: SAGE Ltd.
- Urry, J., 2003. *Global Complexity*. Cambridge: Polity Press.
- Wallin, S. and Horelli, L., 2012. Playing with the Glocal Through Participatory e-Planning. *Journal of Community Informatics*, 8(3). [online] Available at: < <http://ci-journal.net/index.php/ciej/article/view/883> > [Accessed 7 May 2015].
- Wallin, S. and Horelli, L., 2010. Methodology of a user-sensitive service design within urban planning. *Journal of Environment and Planning B*, 37(5), pp. 775–791.
- Wallin, S. and Horelli, L., 2009. Arvioinnin paikka alue- ja yhdyskuntasuunnittelussa (The role of evaluation in urban and regional planning). *Hallinnon tutkimus*, 28(5), pp. 109–116.
- Wallin, S., 2015. Kaupunkisuunnittelua ja itseorganisointuvaa toimintaa - Kertomus Helsingin Herttoniemen muutoksesta (Urban planning and self organising action – The story of urban transformation in Herttoniemi, Helsinki). Accepted paper for the journal *Alue- ja ympäristö*, June 2015. forthcoming.
- Weber, E.P. and Khademan, A.M., 2008. Wicked Problems, Knowledge Challenges, and Collaborative Capacity Builders in Network Settings. *Public Administration Review*, 68(2), pp. 334–349.