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# **Integrated Strategic Spatial Planning? – A Practice-Based Example of the Communicative Challenges of Integration**

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## **Abstract**

The strategic spatial planning of sustainable urban areas requires integrated planning practices crossing sectoral and scalar boundaries. The hypothesis is that planning solutions are influenced by a variety of communicative dynamics over time. This research provides an analysis of a practice-based example of the communicative dynamics of integrated planning, based on the use of longitudinal time-series data of organized actor interactions during a strategic spatial planning process in Finland, supported by a series of participant interviews. Based on the findings, one can conclude that sectoral and scalar siloes are disastrous to integrated planning. The findings suggest that a range of institutional and actor-relational factors affect integrated planning processes, revealing diverse practice-related social complexities and micro-dynamics over time. There was a clear separation of themes and scales in the process, contributing to the actors' inability of generating an overall understanding of the process, partially restricted by the co-existing organizational structures and hierarchies. In addition, multiple simultaneously ongoing processes, distrust, arguments, and disputes affected the actors' willingness to collaborate with each other, further reducing their capabilities of knowledge co-creation through the sharing of expertise. Further development of integrated planning practices and associated research activities will have to take into account the their irreducibly psycho-social underpinning. Ultimately, advocates of integration will have to face the fundamental question of relational being, and expand the assumptions behind integration beyond the dominant Western epistemology.

**Keywords:** integrated planning, strategic planning, planning process, planning process dynamics, plan-making, comprehensive planning, complexity planning, ubuntu

# 1. Introduction

The dynamic complexities of urbanization processes require systemic understanding of the interconnections between various sectors and scales, taking into account their non-linear and emergent complexities over time in order to reach sustainable solutions to the wicked problems. In order to respond to the need of more holistic planning, the concept of integrated planning has been studied over decades (Bertolini, 2017; Holden, 2012; Vigar, 2009; Geerlings & Stead, 2003). Especially the early integration of transport and land use planning is recognized as an essential precondition of sustainable development, but often this relationship is neglected in planning processes within the practice (Bertolini et al., 2005; Te Brömmelstroet & Bertolini, 2008, 2010). However, in addition to the external complexities with which planning is dealing, the systems dynamics of planning processes occur within the communicative complexities of the processes, and in the interaction of these two. In particular, planning processes can be understood as multi-minded systems, in which the complexity exceeds the capabilities of individual humans (Innes & Booher, 2010; Eräranta, 2019). Consequently, the communicative approach to planning has been discussed as a possibility for integrating multiple knowledges into the planning processes (Innes & Booher, 1999; Healey, 2003). Still, the complexity of the wicked problems exceeds the complexity of the planning organizations, which are organized in a siloed manner. Some tasks fall in between various departments, even as cross-cutting themes have been identified as challenging the sector-based organizations (Stead & Meijers, 2009). Ultimately, if the actors in these departments do not communicate actively, these tasks may be left unaddressed.

The aim of this research is to provide deeper understanding of the practice-based communicative barriers of integrated spatial planning, and to enhance the discussion between research and planning practice. The empirical analysis utilized detailed time-series data of organized actor interactions during a four-year statutory strategic spatial planning process in one of the municipalities in the Helsinki Capital Region (Finland). For enabling practice-based understanding of a four-year process, methodological triangulation is utilized, combining social network analysis methods and actor interviews. Overall, the paper is organized as follows. In the following section, the theoretical background of integrated planning as a communicative practice is reviewed, pointing out the identified research gaps. Then, the research questions and methodology are described. Thereafter, in the fourth section, the main findings are presented, which are then discussed further in the subsequent section. The paper ends with a concluding section, including suggestions for further research.

## 2. Background

### 2.1 Understanding Integration in Spatial Planning

Discussion of integrated planning has been ongoing since the 1970's (Wiek & Walter, 2009), but there is no commonly shared definition. In addition, smooth operationalization in planning practice still remains scarce. Integrated planning typically serves as a concept for various holistic planning approaches (Kidd, 2007). Previously, various frames for analysing dimensions

of integration have been suggested (Cowell & Martin, 2003; Healey, 2006), discussing, for example, the strategic and operational aspects of integration. Building on these, the approach of Stead and Meijers (2009) has framed integration as a hierarchy from co-operation (functional relationships to avoid duplicating work) through coordination (adjusting functions not to leave gaps) to integration (joining efforts for creating a policy owned by multiple actors). Coordination and integration are typically utilized as synonyms, even though they entail very different organizational structures (Curtis & James, 2004). Coordination refers to a monocentric structure, whereas integration entails a more connected structure with all actors linked to each other.

Even though the exact definition of integration varies, horizontal and vertical - or sectoral and scalar - integration is typically included in all of the frameworks (Healey, 2006; Kidd, 2007; Vigar, 2009; Holden, 2012), complemented with organizational integration (Kidd, 2007). Sectoral integration refers to integration between separated sectors (Geerlings & Stead, 2003). For example, land use and transportation planning are strongly interconnected fields, but have developed different methods for conceptualizing and analyzing their distinct objectives (Mäntysalo & Kanninen, 2013; te Brömmelstroet & Bertolini, 2010). Thus, integration between sectors is further challenged by the complexity of understanding the non-linear interdependencies between the various sectors. In addition, smooth integration is challenged by the divergence of values, ideologies, jurisdictions, epistemologies, and policies, as well as the conflicts between institutions (Waddell, 2011; Holden, 2012).

Organizational integration refers to the collaboration between actors (Kidd, 2007) as a prerequisite for horizontal and vertical integration (Koglin, 2015; Tornberg, 2010; Eriksson, 2017). The understanding of organizational integration has been elaborated through, for example, organizational structures (Koglin, 2015), collaboration (Tornberg, 2010), and organizational identities (Eriksson, 2017). The adaptation of organizational structures towards more collaboration between sectors may support integration aims. However, social and political integration is a more complex process and thus more challenging to achieve, as suggested by Schöller-Schwedes (2010). Organizational structures affect, for example, social and power relations, which planners are not consciously aware of, affecting also the outcomes of planning processes (Koglin, 2015).

Integrative practices in planning are influenced by various institutional and substantive barriers. In the literature, the institutional barriers have been discussed more than the substantive ones (te Brömmelstroet & Bertolini, 2010). The institutional barriers include, for example, the distinctive budgets, different procedures, weak and contradictory incentives for cooperation, reluctant departmental cultures, and lack of efficient management mechanisms (te Brömmelstroet & Bertolini, 2010: 86). Additionally, there are some substantive differences between land use and transportation planning domains, such as the planning objects, tools and instruments, operational modes, and educational approaches (Te Brömmelstroet & Bertolini, 2010, p. 86). In particular, Te Brömmelstroet and Bertolini (2010) have suggested that knowledge is an essential mechanism for bridging the substantive barriers of integration. Integrated planning is largely influenced by institutionalized power dynamics, working

relationships and traditions within and between organizations (Hrelja, 2015; Holden, 2012), suggesting that the communicative barriers of integrated planning should be better understood.

## 2.2 Communicative Planning as Analytical Framework and Research Gaps

In this research, integrated planning is understood as *the communicative practices over time, enabling the crossing of scalar and sectoral boundaries in order to reach systemic and holistic planning solutions*. Thinking of integration as a process is different from the traditional sectoral and outcome-centered approach, which has focused mainly on static settings (Candel & Biesbroeck, 2016). The procedural focus is especially important as planning processes operate on the basis of distributed intelligence and dialogue (Innes, 2005, p. 59). The communicative planning approach (Innes & Booher, 1999; Healey, 2003; Booher & Innes, 2002; Innes, 2004) serves as a frame for the integrative aims by considering the importance of multi-actor communication, through which shared understanding and knowledge generation is enabled. In general, communicative planning theory has acknowledged the challenges caused by sectoral policies (Healey, 2003). In particular, various networked process structures influence the knowledge transfer, information diffusion and learning capabilities in organizations (Burt, 2000; Rowley *et al.*, 2000; Reagans & McEvily, 2003; Koppenjan & Klijn, 2016), typically co-existing with formal organizational structures (Lubell *et al.*, 2012).

Reflecting on the potentials of integrated planning, communicative planning can be utilized as an approach for dealing with networked settings where power, values and knowledge differ between actors (Innes & Booher, 1999). According to Innes and Booher (1999, p. 415), if an agreement has not been reached through an open, inclusive and legitimate process, it is unlikely supported or understood. Thus, communication and collaboration are essential requirements for integrated planning practice, and networks are seen as a key to knowledge diffusion across actors from various sectors (Holden, 2012; Vigar, 2009).

Underlying the need for better understanding of the communicative barriers of integrated planning is the identified requirement for acknowledging the interactive process that reproduces knowledge in planning (Innes, 1998). Even though integration is regarded as an essential concept in planning, little attention has been given to the normative aspects of integration (Holden, 2012). Integration is sometimes seen as a *'humanistic push-back against the dominance of scientific rationality'* in planning (Holden, 2012, p. 11). However, the human-related and social aspects of integration *over time*, and their possible barriers, are not discussed in current research, which is more focused on the institutional and substantive aspects of integration (Vigar, 2009; te Brömmelstroet & Bertolini, 2010), largely not acknowledging the temporal aspect of the processes (Eräranta, 2019; 2020). Furthermore, integrated planning is context-dependent (Hrelja, 2015), and the conditions for integration are situated within a unique set of circumstances (Tornberg, 2011). Consequently, practice-based methodology and empirically grounded descriptions are needed for understanding the challenges in the reality of practice. Thorough analyses of planning processes over time have been scarce, and the descriptions concerning the development of planning practice have remained on a too general or abstract level (Rydin, 2013) for making an impact. Specifically, the working practices of integrated planning have not been studied in depth (Hull, 2008; Stead, 2008), apart from some

research of practices in public transportation planning (Pettersson & Hrelja, 2018; Hrelja, 2015). However, practice-based examples have been suggested to have potential of revealing the challenges of collaboration in integrated planning (Tornberg, 2011).

## 2.3 Case Context

The empirical analysis of this research utilizes detailed time-series data of organized actor interactions during a four-year statutory strategic spatial planning process in one of the municipalities in the Helsinki Capital Region (Finland). The Helsinki Capital Region includes four municipalities: Helsinki, Espoo, Vantaa and Kauniainen, having in total over 1.1 million inhabitants in 2015. The Finnish planning system works within the model of a Nordic democracy. The Nordic countries are characterized by the strong role of local authorities, and by the close integration of central and local governments (Baldersheim & Ståhlberg, 2002).

Planning is a central element in the Finnish urban development system, regulated mainly by the Land Use and Building Act (132/1999), with target-oriented goals for comprehensive and well-informed planning among various stakeholders. Municipalities hold a planning monopoly, even though the planning processes still involve a diverse set of private and public actors. The Finnish planning legislation guarantees the municipal planning organizations a powerful position, even though the role of the private sector has increased during the last few decades (e.g., Kangasoja & Mattila, 2017; Mäntysalo *et al.*, 2011). The act has formalized the participation of various actors by the regulation about involving them in the planning processes, and planning the interaction processes in advance. This has given various actors an official position as part of the planning processes, affecting also the structure of the processes. The act regulates participation in planning processes with the intention to 'ensure that everyone has the right to participate in the preparation process, and that planning is high quality and interactive, that expertise is comprehensive and that there is open provision of information on matters being processed' (Land Use and Building Act 132/1999 § 1).

The planning system is hierarchical with higher level plans guiding lower level plans. The Finnish planning system has three main levels: the regional plan, the local (municipal) master plan, and the local detailed plan. Regional councils are responsible for the regional land use plans, whereas the municipalities prepare the local master plans and detailed plans in collaboration with for example public authorities, residents and private property developers. Decisions are made by politically elected officials via representative democracy within the municipality. In addition, the so-called MAL (land use, housing and transportation) agreements act as an integrated planning forum for strategic planning in major Finnish city-regions (Bäcklund *et al.*, 2018). These novel informal procedures aim for agreements between city-regions and state for programming strategic investments that require large financial support. These cross-sectoral schemes do not have legal status, and bring along crucial challenges for Nordic democratic control principles.

## 3. Methodology

### 3.1 Research Questions

This research considers the analysis of the interaction between people as essential for understanding the integrated planning practices. Interaction in planning processes cannot be understood only through the consideration of the institutional characteristics of the organizations involved in the process, nor can the substance of the process be understood only through the separated characteristics of the plan itself. Instead, understanding of the integrated planning processes requires the identification of the interrelations and emergent properties between the individual actors and their interaction, concerning the thematic considerations of the plan over time. To address the identified research needs, the empirical study aims at understanding the actor-relational characteristics of thematic integration, utilizing detailed longitudinal time-series data of organized actor interactions (i.e., meetings in which actors participated) of a four-year statutory strategic spatial planning process in the Helsinki Capital Region. The research questions are:

*RQ1: How does the network of thematic actor interactions unfold over time?*

*RQ2: How do the thematic network structures contribute to the actors' holistic understanding in the process?*

*RQ3: What are the factors behind the thematic network structures?*

### 3.2 Methodological Framework

The empirical study in this research utilizes detailed and thematic longitudinal time-series data of organized actor interactions during a statutory strategic spatial planning process in one of the municipalities in the Helsinki Capital Region, Finland. The analysed process lasted approximately four years, enabling the gathering of a data set for analysing the unfolding communicative process over time. The raw data included process documentation of over 10,500 digital files, in addition to hand-written and hand-drawn material, which was available still after the process was finished. Combined with document analysis, part of the raw data was processed to a standardized time series of approximately 400 organized and thematized actor interactions, defining the network ties and boundaries by the records of interaction during the process. The process was phased into four periods of time: goal-setting phase ( $G_1...G_6$ ), draft phase ( $D_1...D_4$ ), proposal phase ( $P_1...P_9$ ), and ratification phase ( $R_1...R_6$ ), following the phases outlined in the Finnish planning regulation. These phases were then further divided into intervals of two months for increasing the resolution of the data of the process itself. Information of the residents participating was not individualized during the process, and was limited out of the analyses. All data was anonymized to avoid harm to the research subjects.

To allow the analysis of the thematic dynamics, the meetings were categorized based on their topics mentioned in the meeting invitations. The meeting themes were divided into two subgroups: procedural (decision-making related, plan documentation, other official documentation, detailed plans, site visits, alternatives and modelling, plan situation, goals) and

sectoral (mobility, commerce and business, public services, cultural heritage, nature and recreation, municipal engineering, economics).

Social network analysis (SNA) methodology was selected to analyse the longitudinal time-series data, due to its potential in revealing the dynamics of the thematic interactions, bringing new possibilities of understanding the evolving communicative processes (Eräranta & Mladenović, 2021). As an established methodology, SNA considers relational attributes as arising from the social processes for exploring the dynamics of nodes (actors) and their ties (interactions) over time (Wasserman & Faust, 1994; Scott, 2017). In particular, the expected benefit of using SNA in process analysis is its potential in disclosing the complex social dynamics over time – both visually and numerically. The potentials of SNA in planning and public administration research have been considered significant (Dempwolf & Lyles, 2012; Kapucu *et al.*, 2014).

*As a SNA concept, an affiliation network* (Latapy *et al.*, 2007; Newman, 2001) consists of two types of actors (in this research the actors and the meetings in which they participated) and their ties over time. Affiliation analyses of the thematic network were elaborated through indegree analyses, which indicate the actors' connections to the thematized meetings through directed ties. The directed ties represent the connections from the actor nodes to the thematized meeting nodes, allowing the possibility of analyzing the actors' attendance within and between the various themes through indegree analyses. The indegree of a node,  $d_i(n_i)$ , is the number of nodes that are adjacent to  $n_i$ , that is the number of ties ending at  $n_i$  (Wasserman & Faust, 1994, p. 126). The indegree of a thematic node represents the amount of times the various actor nodes are linked to it during an interval of time, visualized as the size of the node. Direct ties between actors were not established. The analysis aimed at generating understanding of how the themes were linked together and how the actors were positioned considering the different themes over time. The software used for the data analysis in this research was Gephi 0.9.1, allowing the statistical analysis and visualization of the affiliation networks. The validity (Gray, 2009) of the SNA findings was tested through interviews with actors who had participated in the analysed process.

The eleven interviewees were selected based on their intensity of involvement in the process, in order to ensure the quality of the information based on their breadth of process experiences. Following the standards of qualitative research (Symon & Cassell, 2013), semi-structured interviews focused on a set of questions about the process-related memories before the SNA findings were shown, the validation of the SNA findings, and the reasoning and impacts of the networked structures. The interviews were recorded and transcribed. They were conducted in Finnish, and the interview data has been anonymised.

## 4. Findings

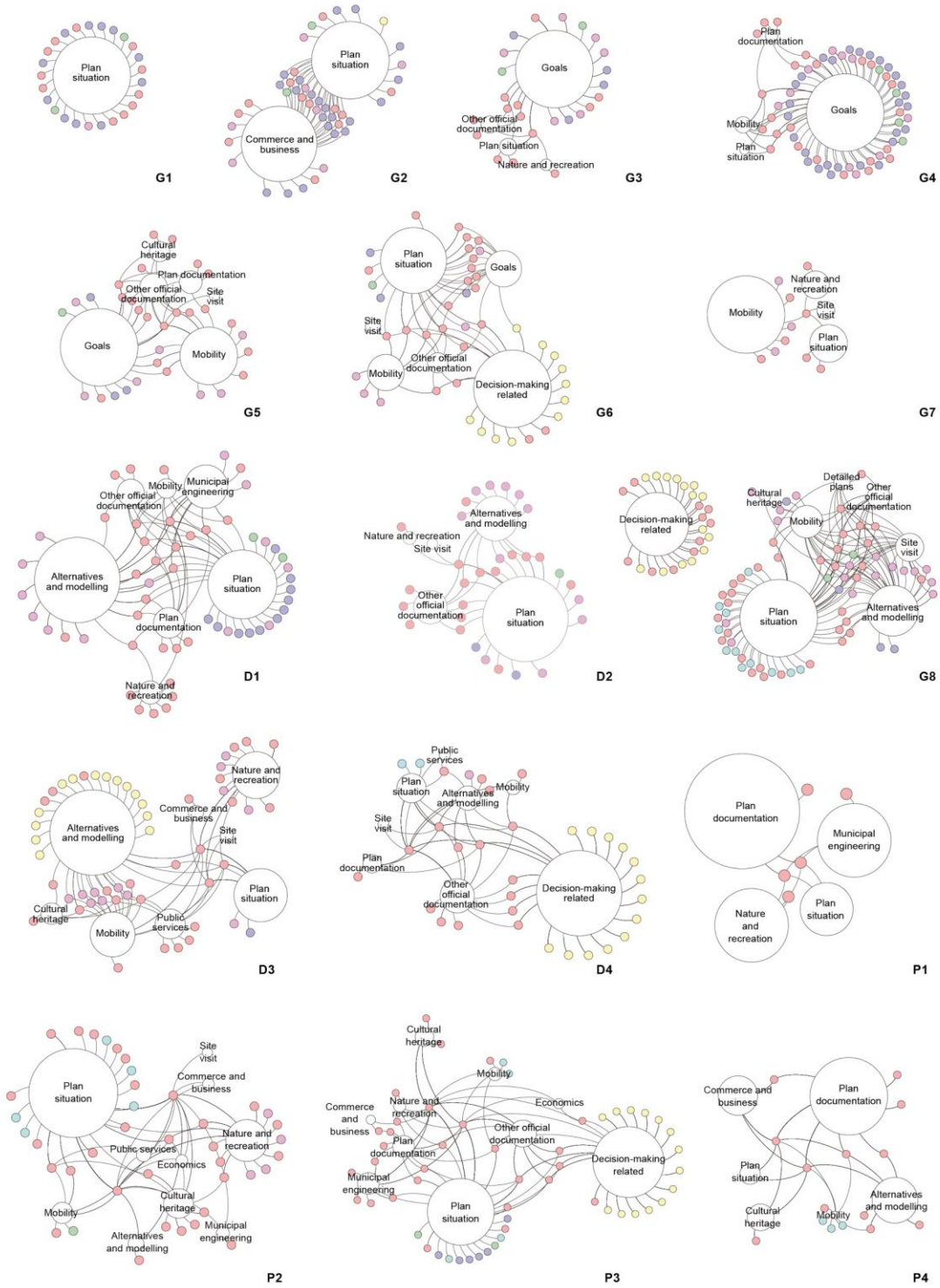
### 4.1 Thematic Network Dynamics and Their Validation

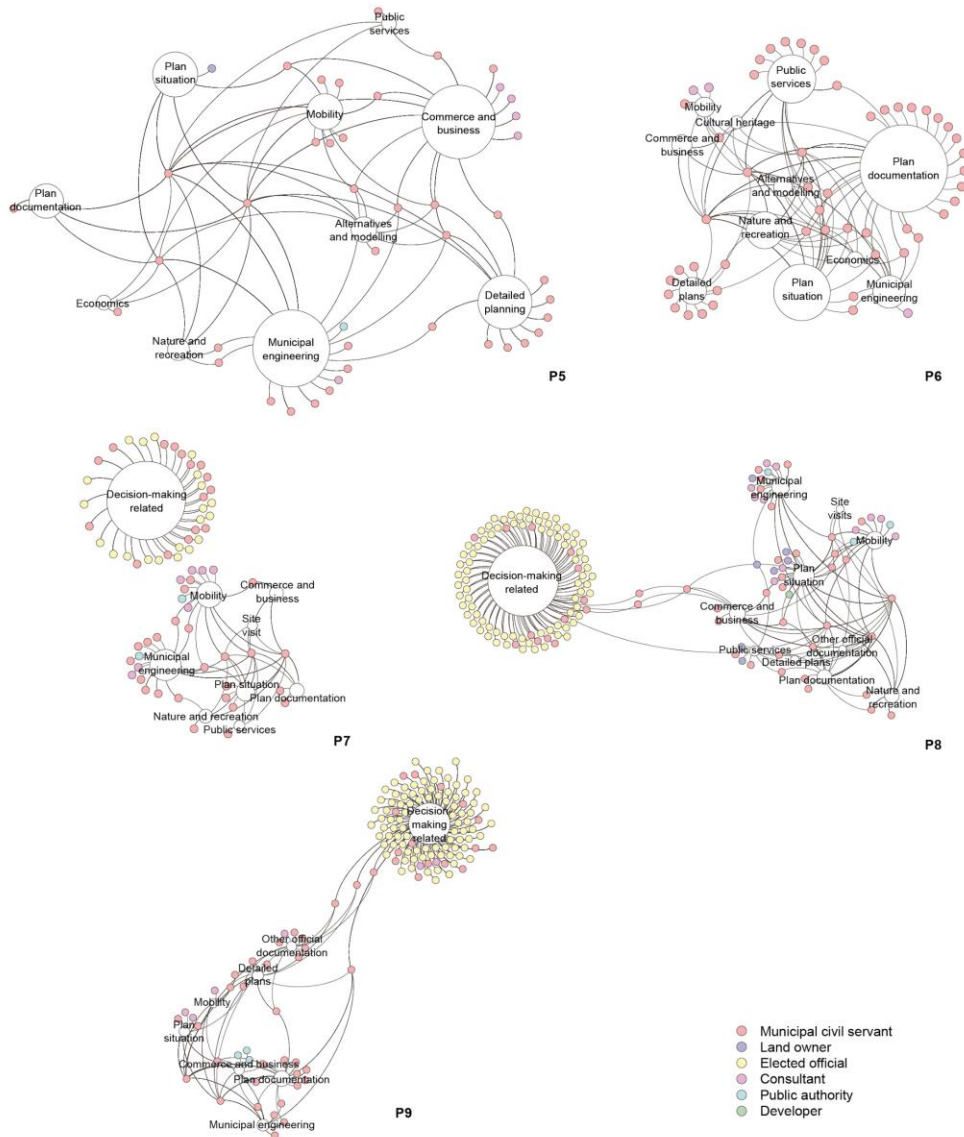
The thematic network did not stay stable during the process, as can be seen in Figure 1. There was variation in the intensity of the actors' involvement in various themes, and in the presence



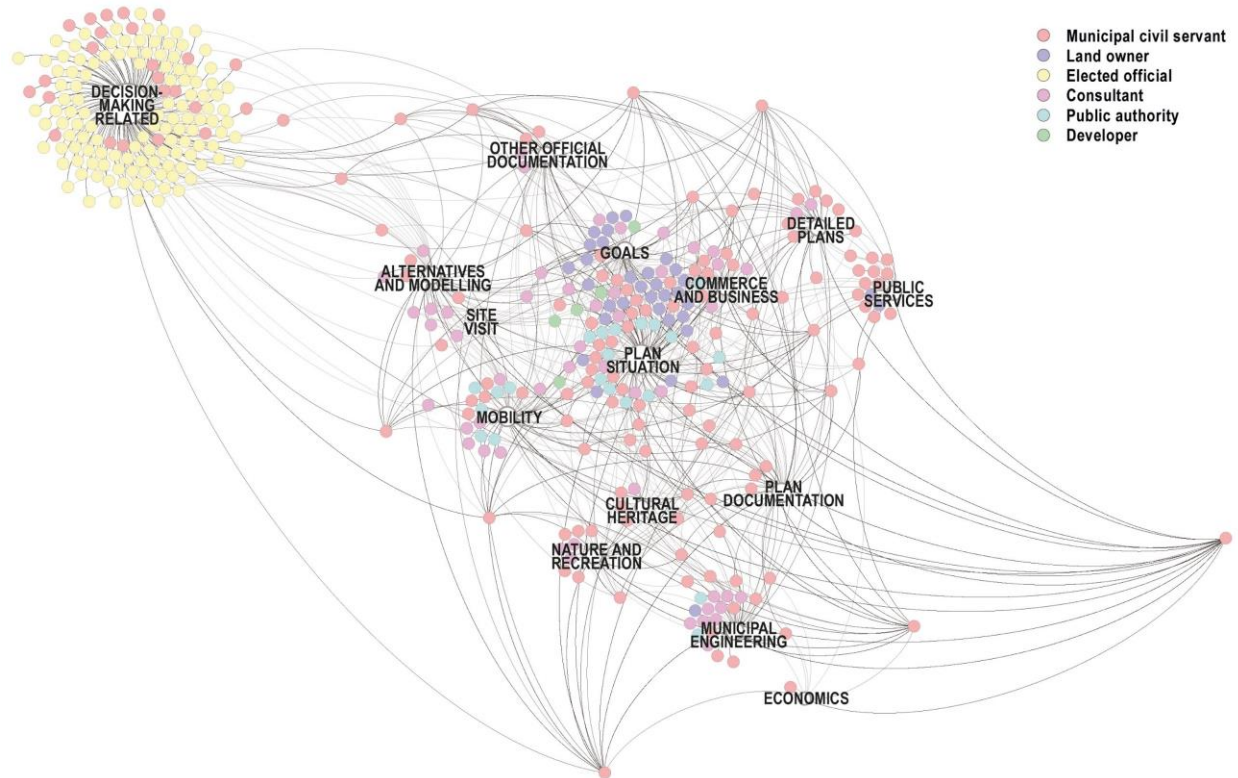
of various themes over time. Furthermore, the intensity of ties between themes varied considerably over time. The cumulative indegree in the whole process varied between the themes (min= 26 for economics, max= 1,074 for decision-making related). In most phases, there was only one actor connecting all of the themes together. One of the themes, the plan situation theme, was included in most of the phases during the process. Some themes were tied to only certain phases of the process. For example, the decision-making related theme usually occurred in the end of each consecutive phase of the process (goal-setting, draft, proposal, ratification), when formal decisions were made. Detailed plans, on the other hand, began occurring more intensively towards the end of the whole process as the more detailed plans began to reach their initial phases. Other themes occurred in a randomly distributed manner over time. The largest values were related to the plan situation and mobility themes. On the other hand, the goal and decision-making related themes were the ones most weakly connected to other themes. Procedural themes, such as the plan situation, plan documentation, alternatives and modelling, detailed plans, and other official documentation, were comparatively well connected to other themes. However, the sectoral themes, such as economics and cultural heritage, were relatively weakly connected. The ties between the various sectoral themes were typically weak, suggesting that the knowledge flows between the various sectoral themes were not very firmly established. Consequently, there were no actors connecting all of the themes together over the whole process. Moreover, over a half of the actors (65.3%) were not connected to more than one theme during the process, as is shown in Figure 2.

The participants of the process were not surprised of the thematic SNA findings in the interviews. All of the interviewees had described the separation of the sectoral themes already in the first part of the interview, when the SNA findings were not yet shown. The interviewees described the SNA findings with expressions such as *'Yes, this represents the process'*, *'I think this tells about the specific features of the process'*, and *'Yes. I think this is really... I think this is exactly like it'*. Some of the interviewees pointed out that some of the findings could be generalized to other same level processes as well. For example, one interviewee explained that *'Yes, this is telling about the process. [...] And this is typical for strategic spatial planning processes in general'*. However, some interviewees suggested that the thematic dynamics are always context-dependent, and would have a different emphasis in another process. Overall, many interviewees were unaware of the thematic complexity of the process. Once the interviewees saw the SNA findings, many of them pointed out their experienced lack of understanding of the complexity of the process when perceiving it from one thematic perspective only. One interviewee, for example, explained: *'Looking at these, I somehow feel that I was not completely aware of everything that was going on'*.





**Figure 1:** Thematic dynamics in the process varied over time.



**Figure 2:** The cumulative thematics of the process show that most of the actors were connected to only one theme.

## 4.2 Thematic Integration and Overall Understanding

The interviewees had very few exact memories of the process, and most of them were not able to explain the evolution of the process over time. One interviewee explained that due to infrequent attendance in the process, *'I do not have an overall view. It was more like dropping by every now and then'*. Typically, the memories were not ordered in time, and focused mainly on aspects with a direct effect on the interviewee's own tasks. The memories of the interviewees were strongly focused on the themes in which they had participated, and most of them were not able to describe the other themes even on a general level. As one interviewee stated: *'I do not have a clue of what was discussed about the themes in which I was not involved.'*

Many of the interviewees pointed out that generally there was not an overall view of the process due to the thematic separation of interaction between the actors. One of the interviewees explained: *'There was not a clear overall understanding of the themes and their interrelations. They were always handled separately.'* According to the interviews, the separation of sectoral themes is typical for processes of the same level in general, as described by one of the interviewees: *'They [sectoral themes] are unfortunately discussed very separately.'* Moreover, the sectoral experts felt they were not involved in the integration of themes during the process together with a core team of planners, but joined only for offering their own sectoral views of the plan. One of the participants explained: *'The core team analyzed the findings of the sectoral*

*investigations and invited the sectoral experts in when needed.'* After periods of sectorally divided discussions, the integration of themes was described to take place at the end of the draft and proposal phases. Some interviewees suggested that the sectoral themes are usually brought into planning processes too late and considered merely as restrictions to a plan. The discussion should be commenced already earlier to properly integrate all sectoral aspects into the plan, as suggested by some interviewees.

Still, despite the above mentioned shortcomings, the process was considered as a good example of interaction and integration in relation to previous planners' experiences. Some of the interviewees pointed out that the knowledge transfer worked out comparatively fluently in the analyzed process when comparing with experiences from other same level processes. One of the interviewees claimed: *'I think that the communication and information exchange worked better than in many other processes. [...] In some processes it is even more sectoral.'* In addition, many of the interviewees pointed out that the communication between land use and mobility planning was even considered overemphasized. One interviewee, for example, stated: *'There was a mobility planner involved constantly.'*

### 4.3 Reasons behind the Thematic Structures

Many of the interviewees pointed out that actor-related issues influenced the networked structures in the process. One interviewee described: *'Things are person-dependent. I guess that was evident also in this process.'* The actor-related issues were typically emphasized by stating that the core team had a strong influence on how the communication in the process was carried out. Most of the interviewees pointed out the close collaboration of the core team of planners, which might have challenged the knowledge flows outside the team. One participant, for example, thought: *'The core team was very dense. Very dense collaboration. And could it mean that the information exchange and understanding between them was fluent? [...] But how well were they able to communicate it to others within the unit, I think there were some challenges.'* It was also suggested that teamwork is strongly dependent on actor-relations, and establishing a well-functioning team takes time. In addition, some interviewees pointed out that the turnover of people affected the process as some knowledge was lost and ways of collaborating changed along the way as there were actor-level changes in the process. One interviewee explained: *'I think the most important change was when that actor left. There was a long experience, and a clear view of organizing a process.'*

Many interviewees described that multiple simultaneously ongoing processes contributed to their possibilities of having an overview of the individual processes. In addition, due to the rush with other processes, some of the interviewees felt they did not have enough time for thorough consideration, information acquisition or collaboration in the analyzed process. One interviewee explained: *'Everyone thinks they are going to the same direction. But in reality they are not, because they do not discuss with each other.'* In addition, the collaboration patterns and thematic structures were also influenced by individual working habits, contributing to the possibilities of generating an overall view. One of the interviewees described: *'I felt like I was mostly working on my own in my room,'* not even trying to take too much contact with others in the process. Moreover, many interviewees described that the social relations significantly

affected their intensity of involvement in various themes. When reflecting on the communication in the interviews, some of them pointed out that more active participation in the process could have made a difference, but at the time of the process, there were too acute reasons for not participating. One interviewee, for example, suggested: *'Often you just avoid stepping on someone else's toes,'* whereas another one told: *'We had these arguments. And I decided not to participate anymore.'*

## 5. Discussion

The findings enabled practice-based understanding of the realities of integrated planning processes, which is still mainly lacking in the current research. The selected methodological framework enabled the exploration of the communication-related integration barriers, which contributed to the generation of a holistic understanding of the process, suggesting diverse institutional and actor-relational challenges. Based on the findings, planning processes cannot be reduced to mechanical sequences of actions, but unfold through non-linear actor interactions over multiple years of time. This practice-based example allowed the understanding of the communicative complexities and thematic dynamics in a strategic spatial planning process over several years. As suggested by the findings, integration challenges do not concern land use and transportation planning only, the traditional focus of research (e.g., te Brömmelstroet & Bertolini, 2010), but are to be found already within the land use planning domain itself. Moreover, the challenges of integration go beyond the mere co-existence of various themes and scales in a plan, dealing essentially with the holistic consideration of their interconnections, enabled or disabled by the interaction and communication patterns of people. There was a clear separation of themes and scales in the process, contributing to the actors' ability of generating an overall understanding of the process. From substantive and institutional point of view, all themes and scales were considered during the process. However, there were bottlenecks in the information flow between the various themes and scales, decreasing the ability of holistic understanding and systemic solutions. Based on the findings, the communicative barriers of integration can be divided into institutional and actor-related factors, which are interrelated.

### 5.1 Institutional Factors

As pointed out in the background section, Lubell *et al.* (2012) have suggested that institutions and networks should not be seen as substitutes to each other, but as co-existing in organizations. Based on the findings, the networks and interaction patterns were partially restricted by the co-existing organizational structures and hierarchies. The interview findings imply that the networked structure was merely a way of working, affecting for example the knowledge transfer and daily decision-making, restricted by organizational hierarchies. Based on the interviews, the networked way of working took place within a frame, which featured the traditional public administration view, as described by Koppenjan and Klijn (2016). The organizational structure was traditionally hierarchical, defining for example the formal decision-making structures within the process. Moreover, the networked way of working did not directly interfere with the institutional arrangements, such as decision-making hierarchies. Based on the findings, the network and the actors within the network were only empowered to act within the

boundaries of the institutional arrangements. In addition, the networks were scale-bound, and for most parts were not expected to transfer to subsequent processes in the same area.

As te Brömmelstroet and Bertolini (2010, p. 101) have suggested, developing shared understanding of the critical relationships is more crucial than creating the vision or plan itself. However, the substance-related complexities were dealt with decomposition and specialization instead of opening them up for discussion in order to find the possible interrelations between the various themes. For example, the goals were negotiated and developed in an interactive process, and various actors were invited to join the process over time. Later on, the plan content was not explored in networked settings, but only a few actors were responsible for integrating all themes into a planned solution, and the meetings were merely informative rather than co-creational. The findings suggest that integrative practices within the process remained on the level of cooperation and to some extent coordination, not reaching the integration phase, in reference to the integration hierarchy by Stead and Meijers (2009).

Many of the interviewees described the process through separation of themes and expertise, and told that the discussions in the processes were usually carried out only with one sector at a time. The plan substance was not explored in networked settings, but only a few actors were responsible for integrating the various themes together. In addition, the municipal planning organization was separated to various thematic and scalar parts. Some of the goals of the plan suggested more systemic and holistic aims. However, the findings suggest that sectoral themes were handled separately, and many actors did not have an overall awareness of all themes simultaneously, which was later confirmed by the individual interviews. The findings suggest that sectoral themes are traditionally considered too late in planning processes, which may reduce the possibility of reaching systemic solutions.

Based on the findings, the intensity of ties between the different themes varied considerably during the process, and some themes were considerably weakly connected to each other. As Innes and Booher (1999) have suggested, complex adaptive systems are dependent on the ability of informed people to work as empowered actors in planning processes. Based on the findings, the actors in the analyzed process were unaware of what was happening due to various structural, relational and intentional reasons. The scarcity of connections between the sectoral themes and scales - reinforced by unsystematic documentation practices - suggest that the overall process understanding may be vulnerable to memory loss when individuals change. In many phases, all active themes were connected to each other through one actor only, even if some individual themes were more strongly tied to each other. In some phases, there was no link between all themes, suggesting that there were challenges in the thematic knowledge transfer and process memory during the process. The findings suggest that knowledge between the various sectoral themes did not flow fluently, decreasing the ability of holistic understanding, process memory and, consequently, organizational learning. In particular, the smaller the number of the core actors is, the more vulnerable the process may be to various knowledge and process memory related challenges.

## 5.2 Actor-related Factors

Based on the findings, human-relational dynamics influenced the horizontal and vertical separation of themes during the process. For example, fluent collaboration, trust, arguments and disputes between the actors affected their willingness to communicate, support each other, and share their expertise. In the interviews, the participants of the process named examples of situations in which human-relational confrontations had significantly changed their way of participating in the process. After the process, some of the interviewees had noticed that their more intensive participation - despite of the arguments on human level - would have been needed for a more integrated and coherent planned solution. When focusing on the ad hoc needs and projects, without consideration of their implications for long term development, surprising outcomes may happen due to the actor-relational challenges in communication.

In addition to overall comments about challenges in communication, the findings suggest that personalities, emotions and values had influenced the communication patterns. The participants had different ways of working and reacting to situations during the process, affecting their intensity of involvement. In addition, based on the findings, the separation of themes was partly intentional. The core team members had a strong influence on the communication structures affecting the integration. The intention was to decrease the workload of others, but based on the interviews, other challenges arose due to that decision. The themes were mainly handled among the core team and the assigned experts, and various themes were kept separate from each other. Some participants felt they were left outside of the process even if they would have wanted to participate more intensively, which affected their willingness to share their expertise later on and caused tensions in personal relations. The human-relational challenges are typically not bound to a certain process, but have consequences for subsequent processes as well, as was pointed out by some interviewees.

In addition to the challenges in individual relations within this particular process, the number of simultaneously ongoing processes reduced the ability of forming an overall understanding, partially affected by personal working habits. Based on the interviews, own activity and ability to manage multiple ongoing processes influenced the actors' attendance and information acquisition in the analyzed process. Some actors explained that they did not have time for learning about any other themes than their own responsibility. The actors were challenged by having to allocate their resources between various simultaneously ongoing processes, which decreased their capability of concentrating on a specific process. Thus, when multiple processes are going on simultaneously, the ability to form a holistic understanding of an individual process beyond one's own sector of expertise, is reduced. There is not enough time for holistic consideration and information acquisition that would be needed for long-term organizational learning.

## 6. Conclusions

The findings suggest that more detailed practice-based understanding of the realities of integrated planning processes is needed in order to understand the complexity of underlying challenges. The lens of communicative barriers within integrated processes revealed various



institutional structures affecting the interaction in the process. In addition, multiple factors on the individual and actor-relational levels influence the possibilities for holistic understanding and integrated solutions in strategic spatial planning processes over multiple years. Planning systems cannot be understood only from the outside by dividing them into various subsystems, and analyzing them separately. In the future, understanding of the planning reality should be improved in order to support the practice in acknowledging some of the severe challenges concerning the everyday planning processes.

Processes cannot be reduced to technocratic and mechanical sequences of actions, but they unfold through interactions over time. Understanding of the human perspective is essential to integrated planning processes. So far, the research on integrated planning has not widely acknowledged the human-relational aspect and its impact on the processes. The ignorance of the human context of the processes undermines the meaning of the social actors in the integrated planning processes, affecting the microdynamics of integration on the individual and human-relational levels. In the end, plans are done by humans, all with their personal values, emotions, and personalities, which affect the communicative patterns, knowledge transfer, and sharing of expertise in the processes. Better acknowledgement of the very basic component of all planning processes - the humans - may reveal new understanding of the practical realities of integrated planning (Eräranta & Mladenović, 2021; Mladenović & Eräranta, 2020). Consequently, the socio-psychological underpinnings of everyday communicative practices in planning organizations should be better understood for generating more awareness of the barriers of integrated planning. Further understanding may be enabled through the adoption of diverse methods and comparative studies.

Based on the findings, one can conclude that sectoral and scalar siloes are disastrous to integrated planning. In the analyzed process, all sectors and scales were present, but interaction between them was not encouraged. Suggested by the findings, holistic understanding of the plan solution, and acknowledgement of the interrelations between the various sectors, was largely missing. Despite of the amount of resources spent on the process, many of the participants felt that their expertise was forced into a silo instead of allowing the interaction between the various sectors. Thus, integrated planning does not necessarily require more resources, but consideration of how the available resources ought to be utilized in a best possible way to allow the identification of interrelations and interdependencies between the various sectors, and enabling the consideration of themes that fall in between organizational silos. Integration is not only about merging plans of two or more departments together, but deals essentially with interaction and collaboration of people. Bringing people together is not enough for integration. Instead, integration requires knowledge co-creation through the sharing of expertise. For reaching systemic solutions, in which the interrelations between the various sub-sectors are understood and estimated, planning organizations should enable the discussion between various sectoral themes during the processes. This would also support the development of sector-specific themes by allowing them to be understood as parts of the whole, instead of separate themes. Finally, organizational structures allowing the integrated consideration of cross-sectoral planning solutions are crucial, supporting also organizational learning through knowledge dissemination and feedback.

## 6.1 Open ended reflection: Stepping out of the integration box?

At the end of this analysis, the ultimate question remains: Should we talk about 'integration' at all, and do the current premises of 'integration' make a positive contribution to the actual context of planning? While discussing the challenges of integration processes in planning in this particular case, the overarching concern that arises is one of the concept of 'integration' itself. In its current understanding, 'integration' is still built on the idea of acknowledging and accepting the existence of separate self-contained silos in planning institutions. Such understanding that there are separate and isolated entities, which only ex post should be 'integrated', is deeply rooted in the post-enlightenment Western rationalist thinking still prevailing in planning. Based on reductionist reasoning, continuously changing wholes consist of individual parts that can exist separately before being put together at some point in time. Besides there being isolated entities, which can be understood in isolation, the second key assumption is that their 'integration' is a straightforward addition, such as often referred land use and transport planning integration. Thus, the assumption of a planning institution is one of a brick wall, where bricks are all there, and one just simply needs to put them all together.

Questioning this post-enlightenment Western epistemology, let us use another metaphor. What if planning institutions are more like a hand, where there are different fingers, still quite similar, but always behaving in relation to each other, and all together achieving something much more than their simple sum? For example, similar holistic understanding is already available in modern complexity theory, underpinning such fields as physics, biology, and even public policy (Colander & Kupers, 2014). This complexity epistemology recognizes that simplifying reality into isolated entities that all add up simply to a collective sum is not what happens on all the different levels, spanning from quantum entanglement to cell biology and all the way astral dark energy (Lineweaver et al., 2013). Put in some other terms, one and one do not exist without relation to each other, and their sum is actually three of something else than the original ones. The origins of this relational and emergent thinking are also present in many other non-Western epistemologies. For example, Ubuntu philosophy is teaching us that "my humanity is caught up, is inextricably bound up, in what is yours" (Tutu, 1999), emphasizing relational existence, where one is because we are. Similar ideas can be found in the influential Zhuangzi text from Daoism, which argues that the self is not contained in the individual body and spirit but is a part of a much larger unified whole (Watson, 1968), and the early stages of post-WW2 Yugoslavian version of socialism based on the ideas of collectivism over individualism (Thompson, 1948; Vanek, 2017). In fact, by engaging with this multiplicity of worldviews (Gaim & Clegg, 2021), Ubuntu has been related to the development of alternative leadership (Ncube, 2010) and organizational development philosophy (Sulamoyo, 2010; Swartz & Davies, 1997).

Following the footsteps of the rich diversity of epistemologies, our task here is not to end with a firm recommendation which one is to be followed. As previously argued, the key for institutional transformation and achieving not just effective but also healthy planning organizations lies in a shift from an ontology of being to an ontology of becoming (Albrechts et al., 2019), and continuing a commitment to the unsettling of our ways of knowing in planning (Barry et al., 2018). However, one thing is certain. Analyzing and understanding planning aspects in isolation

before their “integration” at some point of the process, presents us with an apparent sum that is neither holistic nor integrated. Hence, to develop systemic understanding, ‘integration’ should go beyond ‘communicating’ or ‘putting together’ towards meaningful co-creation of relational understanding that happens as a process rather than a single moment of communicative activity – opening up views, which cannot be reached by deepening the field-specific knowledges, but exist only in their interaction. For this, we hope that planning practice and research will have, first and foremost, plenty of patience and mutual understanding for all the actors in the institutional transformation, but also courage to step outside the current integration box.

## References

- Albrechts, L., Barbanente, A., & Monno, V. (2019). From stage-managed planning towards a more imaginative and inclusive strategic spatial planning. *Environment and Planning C: Politics and Space*, 37(8), 1489-1506.
- Baldersheim, H. & Ståhlberg, K. (2002) From Guided Democracy to Multi-Level Governance: Trends in Central-Local Relations in the Nordic Countries, *Local Government Studies*, 28(3), pp. 74–90.
- Barry, J., Horst, M., Inch, A., Legacy, C., Rishi, S., Rivero, J. J., ... & Zitcer, A. (2018). Unsettling planning theory. *Planning Theory*, 17(3), 418-438.
- Bertolini, L. (2017) *Planning the Mobile Metropolis: Transport for People, Places and the Planet* (London: Macmillan International Higher Education).
- Bertolini, L.; le Clercq, F. & Kapoen, L. (2005) Sustainable Accessibility: a Conceptual Framework to Integrate Transport and Land Use Planmaking. Two Test-applications in the Netherlands and a Reflection on the Way Forward, *Transport Policy*, 12, pp. 207–220.
- Booher, D. E. & Innes, J. E. (2002) Network Power in Collaborative Planning, *Journal of Planning Education and Research*, 21(3), pp. 221–236.
- Burt, R. S. (1980) Models of Network Structure, *Annual Review of Sociology*, 6(1), pp. 79–141.
- Bäcklund, P.; Häikiö, L.; Leino, H. & Kanninen, V. (2018) Bypassing Publicity for Getting things Done: Between Informal and Formal Planning Practices in Finland, *Planning Practice & Research*, 33(3), pp. 309–325.
- Candel, J. J. & Biesbroek, R. (2016) Toward a Processual Understanding of Policy Integration, *Policy Sciences*, 49(3), pp. 211–231.
- Colander, D., & Kupers, R. (2014). *Complexity and the art of public policy*. Princeton University Press.
- Cowell, R. & Martin, S. (2003) The Joy of Joining up: Modes of Integrating the Local Government Modernisation Agenda, *Environment and Planning C: Government and Policy*, 21(2), pp. 159–179.
- Curtis, C. & James, B. (2004) An Institutional Model for Land Use and Transport Integration, *Urban Policy and Research*, 22(3), pp. 277–297.
- Dempwolf, C. S. & Lyles, L. W. (2012) The Uses of Social Network Analysis in Planning: A Review of the Literature, *Journal of Planning Literature*, 27(1), pp. 3–21.
- Eräranta, S. (2019) *Memorize the dance in the shadows? Unriddling the networked dynamics of planning processes through social network analysis*. Doctoral dissertation. Aalto University.

- Eräranta, S. (2020) Social complexities in collaborative planning processes. In de Roo, Gert, Claudia Yamu and Christian Zuidema (eds) Handbook on planning and complexity. Cheltenham, UK: Edward Elgar, pp.171-185.
- Eräranta, S. & Mladenović, M. N. (2021) Networked dynamics of knowledge integration in strategic spatial planning processes: A social network approach. *Regional Studies*, 55 (5), pp.870-882.
- Eriksson, L. (2017) The Role of Organizational Identities for Policy Integration Processes – Managing Sustainable Transport Development, *Public Organization Review*, 17(4), pp. 525–544.
- Gaim, M., & Clegg, S. (2021). Paradox beyond East/West orthodoxy: The case of Ubuntu. In *Interdisciplinary Dialogues on Organizational Paradox: Learning from Belief and Science*, Part A. Emerald Publishing Limited.
- Geerlings, H. & Stead, D. (2003) The Integration of Land use Planning, Transport and Environment in European Policy and Research, *Transport Policy*, 10(3), pp. 187–196.
- Gray, D. E. (2009) *Doing Research in the Real World*, 2nd ed. (California: SAGE Publications Ltd).
- Healey, P. (2003) Collaborative Planning in Perspective, *Planning Theory*, 2(2), pp. 101–123.
- Healey, P. (2006) *Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times* (London: Routledge).
- Holden, M. (2012) Is Integrated Planning Any More than the Sum of Its Parts? Considerations for Planning Sustainable Cities, *Journal of Planning Education and Research*, 32(3), pp. 305–318.
- Hrelja, R. (2015) Integrating Transport and Land-use Planning? How Steering Cultures in Local Authorities Affect Implementation of Integrated Public Transport and Land-use Planning, *Transportation Research Part A: Policy and Practice*, 74, pp. 1–13.
- Hull, A. (2008) Policy Integration: What Will It Take to Achieve More Sustainable Transport Solutions in Cities?, *Transport Policy*, 15(2), pp. 94–103.
- Innes, J. E. (1998) Information in Communicative Planning, *Journal of the American Planning Association*, 64(1), pp. 52–63.
- Innes, J. E. (2004). Consensus Building: Clarifications for the Critics, *Planning Theory*, 3(1), pp. 5–20.
- Innes, J. E. (2005) Networks and Planning Thought, in: L. Albrechts & S. Mandelbaum (Eds), *The Network Society: A New Context for Planning*, pp. 57–61 (London: Routledge).
- Innes, J. E. & Booher, D. E. (1999) Consensus Building and Complex Adaptive Systems: A Framework for Evaluating Collaborative Planning, *Journal of the American Planning Association*, 65(4), pp. 412–423.
- Innes, J. E. & Booher, D. E. (2010) *Planning with Complexity: An Introduction to Collaborative Rationality for Public Policy* (London: Routledge).
- Kangasoja, J., & Mattila, H. (2017) Facing up to Finnish Planning Pathologies, in: T. Tasan-Kok & M. Oranje, *From Student to Urban Planner: Young Practitioners' Reflections on Contemporary Ethical Challenges* (New York: Routledge).
- Kidd, S. (2007) Towards a Framework of Integration in Spatial Planning: An Exploration from a Health Perspective, *Planning Theory & Practice*, 8(2), pp. 161–181.

- Koglin, T. (2015) Organisation Does Matter – Planning for Cycling in Stockholm and Copenhagen, *Transport Policy*, 39, pp. 55–62.
- Koppenjan, J. & Klijn, E. H. (2016) *Governance Networks in the Public Sector* (London: Routledge).
- Latapy, M.; Magnien, C. & Del Vecchio, N. (2008) Basic Notions for the Analysis of Large Two-Mode Networks, *Social Networks*, 30(1), pp. 31–48.
- Lineweaver, C. H., Davies, P. C., & Ruse, M. (Eds.). (2013). *Complexity and the Arrow of Time*. Cambridge University Press.
- Lubell, M.; Scholz, J.; Berardo, R. & Robins, G. (2012) Testing Policy Theory with Statistical Models of Networks, *Policy Studies Journal*, 40(3), pp. 351–374.
- Mäntysalo, R., Balducci, A. & Kangasojä, J. (2011) Planning as Agonistic Communication in a Trading Zone: Re-Examining Lindblom's Partisan Mutual Adjustment. *Planning Theory*, 10(3), pp. 257–272.
- Mäntysalo, R. & Kanninen, V. (2013) Trading between land use and transportation planning: the Kuopio model, in: A. Balducci & R. Mäntysalo, *Urban planning as a trading zone*, pp. 57-73 (Dordrecht: Springer).
- Mladenović, M. N. & Eräranta, S. (2020). Hear the Rime of the Fellow Mariner? A Letter to the Next Generation of Emphatic Co-Creators in Planning. *Planning Theory & Practice*, 21(1), 164-174.
- Ncube, L. B. (2010). Ubuntu: A transformative leadership philosophy. *Journal of Leadership Studies*, 4(3), 77-82.
- Newman, M. E. (2001) The Structure of Scientific Collaboration Networks, *Proceedings of the National Academy of Sciences*, 98(2), pp. 404–409.
- Pettersson, F. & Hrelja, R. (2018) How to Create Functioning Collaboration in Theory and in Practice – Practical Experiences of Collaboration when Planning Public Transport Systems. *International Journal of Sustainable Transportation*, pp. 1–13.
- Reagans, R. & McEvily, B. (2003) Network Structure and Knowledge Transfer: The Effects of Cohesion and Range, *Administrative Science Quarterly*, 48(2), pp. 240–267.
- Rowley, T.; Behrens, D. & Krackhardt, D. (2000) Redundant Governance Structures: An Analysis of Structural and Relational Embeddedness in the Steel and Semiconductor Industries, *Strategic Management Journal*, 21(3), pp. 369–386.
- Rydin, Y. (2013) Using Actor–network Theory to Understand Planning Practice: Exploring Relationships between Actants in Regulating Low-carbon Commercial Development, *Planning Theory*, 12(1), pp. 23–45.
- Schöller-Schwedes, O. (2010) The Failure of Integrated Transport Policy in Germany: a Historical Perspective, *Journal of Transport Geography*, 18(1), pp. 85–96.
- Scott, J. (2017) *Social network analysis*. 4th ed. (Los Angeles: Sage).
- Stead, D. (2008) Institutional Aspects of Integrating Transport, Environment and Health Policies, *Transport Policy*, 15(3), pp. 139–148.
- Stead, D. & Meijers, E. (2009) Spatial Planning and Policy Integration: Concepts, Facilitators and Inhibitors, *Planning Theory & Practice*, 10(3), pp. 317–332.
- Sulamoyo, D. (2010). " I Am Because We Are": Ubuntu as a Cultural Strategy for OD and Change in Sub-Saharan Africa. *Organization Development Journal*, 28(4), 41.

- Swartz, E., & Davies, R. (1997). Ubuntu-the spirit of African transformation management-a review. *Leadership & Organization Development Journal*.
- Symon, G. & Cassell, C. (Eds) (2013) *Qualitative Organizational Research. Core Methods and Current Challenges* (London: Sage Publications).
- te Brömmelstroet, M. & Bertolini, L. (2008) Developing Land Use and Transport PSS: Meaningful Information through a Dialogue between Modelers and Planners, *Transport Policy*, 15(4), pp. 251–259.
- te Brömmelstroet, M. & Bertolini, L. (2010) Integrating Land Use and Transport Knowledge in Strategy-making, *Transportation*, 37(1), pp. 85–104.
- Thompson, E. P. (1948) *The railway: An adventure in construction*. British-Yugoslav Association. Rab-Rab Press.
- Tornberg, P. (2010) Integration of Land Use and Transportation Planning under the Canopy of a Holistic Plan?: An Argument for Process around Plans, *Journal of Landscape Studies*, 3, pp. 147–157.
- Tornberg, P. (2011) *Making Sense of Integrated Planning: Challenges to Urban and Transport Planning Processes in Sweden*, Doctoral Dissertation, KTH Royal Institute of Technology.
- Tutu, D. (1999) *No Future Without Forgiveness*, Rider Random House, London.
- Vanek, J. (2017) *The Economics Of Workers' Management: A Yugoslav Case Study*. Routledge.
- Vigar, G. (2009) Towards an Integrated Spatial Planning?, *European Planning Studies*, 17(11), pp. 1571–1590.
- Waddell, P. (2011) Integrated Land Use and Transportation Planning and Modelling: Addressing Challenges in Research and Practice, *Transport Reviews*, 31(2), pp. 209–229.
- Wasserman, S. & Faust, K. (1994) *Social Network Analysis: Methods and applications* (Vol. 8) (Cambridge, UK: Cambridge University Press).
- Watson, B. translator, (1968) *The complete works of Zhuangzi*. Columbia University Press.
- Wiek, A. & Walter, A. I. (2009) A Transdisciplinary Approach for Formalized Integrated Planning and Decision-making in Complex Systems, *European Journal of Operational Research*, 197(1), pp. 360–370.