

periods as exceptions, they rather see it as inevitable. The panarchy metaphor indicates four subsequent stages of system behaviour, which in turn suggests various management strategies for the four stages (Gunderson & Holling, 2002). Therefore, timing of management actions is relevant, according to the authors of this model.

This paper focuses on ways to enhance the management of socio-spatial systems from a complexity perspective, learning from ecosystem management. However, there are fundamental distinctions between socio-spatial systems and ecosystems, relevant for the suitability of several management approaches. Based on a literature review, similarities and differences between complex socio-spatial and ecosystems are discussed. Subsequently, the relevance of the panarchy metaphor is analysed.

This analysis shows that the panarchy cycle cannot be applied literally; it can be used as a metaphor, not as a predictor of change. Nevertheless, several points of particular interest for spatial management are distinguished. First, striving for pluripotential socio-spatial systems could enhance the system's ability to deal with unforeseen change, see also the role of biodiversity in ecosystems. The argument is that after a period of reorganisation other, unforeseen elements of the system can be key to the system's functioning. Second, enhancing the learning capacity of socio-spatial systems by increasing the flexibility of the institutional and organisational dimensions, in order to maintain adaptive capacity, seems advisable. More generally, the balance of the robust and flexible elements of the system is a point of attention during all phases of development. However, as the system's balance shifts mainly autonomously, the planner's role is relatively small and varies during different stages of development.

Although there are indications that planning could benefit from including ecosystem management knowledge, the panarchy cycle in particular, further empirical research is needed to analyse these advantages in more detail. Furthermore, the above-mentioned points of particular interest could be examined on different scale levels, e.g. the neighbourhood, region and even supra-regional level. The central question of following research would be whether and how these rather abstract recommendations can be of assistance in generating planning strategies on different scale levels.

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Discussing the Details, about the Development of Trust in Relation to Long Term Contracts

With the introduction of the Investment Fund for Rural Areas (ILG) the Dutch national government delegated the implementation of national rural spatial policies to the twelve provinces. The basis of the ILG are administrative agreements between the provinces and the ministry of Agriculture in which they agree on development objectives to be reached within seven years. The agreement specifies end results; the provinces are free to decide how to realize them. Involvement of the national government is limited to a yearly round

of talks on the progress and a more extensive Mid Term Review (MTR). The relationship between the provinces and the ministry has formally changed from rather hierarchical towards a more horizontal relationship. In initial research, respondents indicated that mutual trust is essential in this relationship. This is underlined by literature stating that especially in long term agreements trust as expectations towards the future, and a way of dealing with uncertainties and risks is a vital basis of agreements.

To gain insight in the complex concept of trust, this paper will answer the question: How did trust develop over time between the provinces and the ministry and how did this influence the working of the ILG? There are three moments in which the vital role of trust between provinces and ministry is visible: the negotiations on the initial agreements, the MTR and the final evaluation. This paper will first focus on how trust influenced the process of developing the agreements. Secondly, the paper will tackle the question on how these agreements influenced further cooperation within the ILG, focusing on the now ongoing MTR.

This study is conducted through literature studies of both scientific sources as well as policy documents. Furthermore, information is obtained from open and semi-structured interviews in order to gain insight in the relevant processes, viewpoints of different parties involved and trust. In order to conceptualize 'trust' the respondents' view points will be contrasted with the ones employed in literature.

The ILG ideology is strongly based on the belief that provinces can organize spatial development in rural areas more efficiently as they are closer to the areas and their stakeholders and have a better insight into the local needs and possibilities. The idea was to give the provinces sufficient room to maneuver to fulfill this role. Therefore, one would expect the agreements to be relatively open. However, the administrative agreements became closed and detailed. This contradiction seems to be mainly caused by both parties trying to assure that the other could not recall its promises, revealing a lack of mutual trust.

The focus on details and numbers as a result of a lack of trust continues in the later process.

The discussions in the first years of the ILG and on the MTR remained focused on formats, on how to get reliable and comparable information from the provinces, not on the qualitative goals itself. In these discussions it seems that the ministry doubts that the provinces will supply the right numbers, and the provinces worry that the ministry interprets the numbers wrong. This on the one hand can deepen the sense of mistrust and on the other might hamper a fruitful discussion between the provinces and the ministry on what the ILG intentionally was about, namely rural development and a new steering philosophy.

Further research

The insights of this study might be broadened by repeating this study in 2014, when the final evaluation of the ILG will take place. Furthermore, respondents indicated that the Parliament plays a vital role in the discussion about the ILG; researching the political dimension of the ILG is expected to enrich the results of this study.

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'Spatial Strategy' or How to Unlock the Fix Spatial Planning Is in

Spatial development seems to happen with or without spatial planning. When analysing current strategy-oriented planning approaches like regional planning, guidelines, infrastructure plans, and urban development plans we find a certain number of shortcomings. Frequently the planning documents lack a substantiated analysis of dominant spatial driving forces, a coherent spatial vision, an orientation towards intended impact, the communication thereof to key decision makers and ultimately planning interventions are less effective than envisaged. This regularly results in the costly duplication of efforts and only rarely sets free potential synergies.

Supporting arguments come among others from two recent sources. (1) "The growing complexity, an increasing concern about rapid and apparently random development, the problem of spatial fragmentation, the problem of increasing socio-economic polarization, the growing interest in environmental issues, a reemphasis on the need for long-term thinking and the sublime aim to develop a more effective planning approach all served to expand the spatial planning agenda" (Albrechts 2004: 743). (2) "Spatial strategies get to 'work' by providing an orientation, or reference frame, which gets shared by many stakeholders in urban development processes. This orientation may be expressed in general principles or in spatial images such as maps and diagrams" (Healey 2009: 441).

The paper develops its hypothesis by using results from (1) an international workshop on spatial strategies in February 2010 hosted by the chair of spatial and territorial development, Munich University of Technology; (2) findings from impact evaluations of the urban development strategies of the Cities of Munich and Vienna; (3) a case study of the Airport Region of Munich. A part of the workshop (1) is the discussion of projects in different European countries. They deal with strategies for metropolitan regions and strategic urban design. The impact evaluations of the urban development strategies (2) ask about the impact of the guiding principles and their connection to the concrete zoning plans of the cities. Prominent topics of the Airport Region case study (3) are settlement development, traffic system and the potentials for the development of the municipalities.

Looking at outcomes of current spatial planning instruments, we feel a need to propose a complementary approach that goes beyond the existing tool box in Germany. 'Spatial strategy' use a visionary perspective that is (1) more selective than comprehensive, (2) acknowledging dominant driving forces that shape places, (3) focuses on specific areas, priority issues or challenges (select and simplify), (4) requires thinking creatively about possible futures and how to get there (process orientation), (5) visualizes what a place could be or should be in the future, (6) assesses the impacts on the region, its stakeholders and timeline and (7) aims to motivate the involved stakeholders (frame and focus).

Main questions that remain open so far focus first on the minimum conditions for a spatial strategy to become a more generic and generally applicable planning approach. Second one has to ask how is the idea of spatial strategy related to established planning approaches and how would it fit into existing planning procedures?

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Measuring the Spatial Complexity of Urban Sprawl Using Different Methodologies – Implications for the State of the Art

Land-use planners and policy makers depend on accurate and dependable base-line estimates of the spatial extent and configuration of land uses. The accuracy of these estimates is crucial if their plans and policies are to be relevant and effective. Yet, in the field of research about urban sprawl it is apparent that choice of how urban spatial characteristics are measured has significant implications for how we quantify and ultimately define sprawl (Johnson 2001; Torrens 2008). Since sprawl is a complex phenomenon (Frenkel and Ashkenazi 2008), the way we choose to measure it affects results and implications for growth management policies that are developed to direct urban spatial development in a sustainable fashion. We therefore ask the question, "How do methodological choices affect outcomes when estimating the amount and configuration of built space over time?"

In this research, we present three GIS-based methodologies for quantify amount and configuration of built space. Although each is a relatively simple methodology, our preliminary investigations yielded different results for each methodology regarding the amount of built space and its spatial configuration (e.g. patchiness and spatial connectivity between built "patches"). The differences may be significant enough that the end-user of such data would reach different conclusions regarding past trends and future planning and policy needs. This emphasizes the importance of a comprehensive comparison of methodologies.

Our case study for empirically testing the methodologies was a 350 km² region in central Israel that includes both urban and rural communities, as well as agricultural land and other open spaces. The first methodology uses high resolution ortho-photos for digitizing polygons on user-defined cluster of built space. The second methodology uses 1:50,000 survey maps (which are created using aerial photos) to delineate each individual building with a single data point. The data points are then used to create a structure density raster grid using a pre-determined search radius. A minimum density is used as a cutoff to divide between open and built space. The third methodology relies on the same data-point file for structures as the second methodology, but an algorithm is employed to automatically assign structures to a given patch of built space (Density-

