TRACK 14: THEORY

TOWARDS A TOPOLOGY OF PLANNING THEORIES – RE-ORGANISING PLANNING KNOWLEDGE IN THE 21ST CENTURY

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1. Spatial planning as a discipline

Planning is an iridescent term. A glance at the literature shows how diverse the term planning can be understood, for example as state action, as spatial distribution of different zones or infrastructures, as governance arrangements of different actors, or as civil society engagement for the common good, and many more. Planning practice is defined accordingly in abstract terms in the literature: Planning as "linkage between knowledge and organised action" (Friedmann and Hudson, 1974, p. 2), i.e. connecting knowledge and action, or as an attempt to control the future ("planning as future control", Wildavsky, 2018, p. 128) or "planning activity as practice of knowing" (Davoudi, 2015, p. 317). Gunder (2010, p. 299) described planning as the ideology of how we define and use space, whereas Brooks (2019, p. 9) understands planning as the process by which we try to shape the future. These and other definitions do have in common a strong orientation towards the future (i.e. it is not just a description of the present), which is accompanied by a direct normative orientation towards action. As Alexander (2016, p. 92) already noted, the problem with all these definitions is not that they are not true, but rather that they are too abstract for a definition. These definitions are hardly sufficient in narrowing down what is (and especially what is not) meant by the term spatial planning. It is undisputed that the future orientation of spatial planning undermines a concrete analytical understanding, "the object of planning, future action, routinely involves the unique and novel" (Forester, 1982, p. 3). Nevertheless, or perhaps rather because of this, it is essential to explain the underlying understanding of planning.

However, our respective understandings of planning are dependent on our theoretical perspectives, shaping our reality(ies) and perceptions, determining our problems and solutions, and how society deals with it. In this process, theories serve as lenses, as glasses through which we grasp the world out there, make it tangible and discussable, cast it into constructs of realities and define all our assumptions. One of the profound experiences in dealing with planning theories has been the realisation that these theoretical lenses can be changed, so that at one time spatial distribution issues are in the

foreground, at another time the actors behind them and their possibilities for action. What changes by switching the perspective is all-encompassing: the problem definition, the approach to the solution, the methods and forms of knowledge selected, the possible aims to be achieved, and not least the fundamental understanding of what we call spatial planning. It is therefore all the more astonishing that in many discussions and publications it is precisely the study of planning theories that is degraded as being of little benefit to practice (Alexander, 2016, p. 95).

With this article, we engage to contribute to a re-organisation of knowledge for planning in the 21st century. Numerous challenges, be it the impacts of climate change and adaptation and mitigation strategies, or societal polarisation and the question of appropriate decision-making, require an accessible planning knowledge to be combined in interdisciplinary contexts as well as transdisciplinary research questions with society. Therefore, we urgently need to restructure our planning knowledge for a fundamental integration of spatial and planning perspectives on these challenges, but also its paradigmatic limitations and blind spots. First, we introduce a novel systematisation of planning knowledge according to the specificity of future orientation in planning knowledge (section 2). In the following we investigate a systematisation of multiple levels of planning theories according to their action orientation (section 3). In section 4 we present the entire Topologie of Planning Theories based on the relation of different planning theories towards each other in the knowledge field with different ontological and epistemological orientations. In concluding remarks we reflect upon this systematisation and explain the benefit from this re-organisation of planning knowledge.

2. Systematicity and knowledge in planning

But what do we mean by systematisation? At the core of this is the question of how planning knowledge can be grasped, how it can be distinguished from everyday knowledge, and how it can be justified. Following Hoyningen-Huene (2013), this is a question of the systematicity of knowledge. If knowledge is systematised within a discipline, we can speak of a scientific area of study - in distinction from the largely unstructured everyday knowledge. The extent to which spatial planning actually constitutes such a scientific field or not is controversially discussed (Behrend/Levin-Keitel, 2020). As shown, spatial planning and its understandings are diverse, as are the theoretical perspectives that can be taken on it. Systematisation of theoretical approaches generally helps to identify and relate essential differences but also commonalities of single theories. Comparable to a matrix or a fabric of knowledge, the purpose of systematisation is not to separate and exclude individual theoretical contributions, but rather the basis of any science for orientation and directions in the field of knowledge. Existing systematisation in the field of planning theories - like the divide into substantial and procedural theories by Faludi (1976) or the temporal differentiation in generations or historical phases (Rittel and Webber, 1973) - turned out to be useful as analytical categories, but less helpful in deepening planning theories focussing primarily on actions or on knowledge that is directly linked to actions (Alexander, 2001; Alexander, 2016; Amin and Roberts, 2008; Dalton, 2007). However, as Phil Allmendinger (2002, p. 96) results: *"Planning theory now has a diverse and fragmented landscape. The need for a typology to help organize and explain these positions in relation to different schools of theory, other disciplines and planning practice is as necessary as ever."*

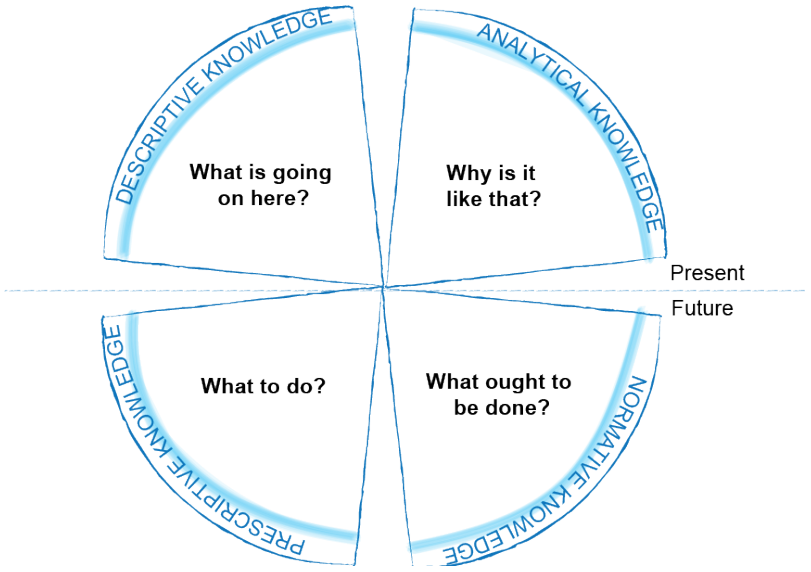

Figure 1: Different forms of present and future oriented knowledge in planning (own illustration)

What constitutes planning varies depending on the knowledge claims to current realities or future imaginings (Rydin, 2007; Campbell, 2012; Davoudi, 2015). A critical reflection of these forms of knowledge lead to conclusions regarding its ontological positions and the already mentioned action orientation towards a wishful future: knowledge about the present is not the same as knowledge about the future (fig. 1). The distinction between knowledge about the present state and the future causes a key misunderstanding between planning practitioners and academics: According to Campbel (2012) planning practitioners expect improvements in terms of the present - and accordingly what should be done right now. Knowledge concerning the future, on the other hand, is much more normative and able to question current practices by changing perspectives - but there is little research on this (Campbell, 2012, p. 138), and reveals the difficulty of translating such findings into practice. Important to understand about these different forms of knowledge (knowledge about the present and about the future) is the inherent differentiation along their action orientation and direct translation into practice accordingly.

3. The multi-levels of planning theories

To advance the discussion, we give a contribution based on the characteristic starting point of the orientation of planning knowledge towards the corresponding action field planning (practice): The Topology of Planning Theories. The topology, in contrast to a typology, does not aim to identify individual types and distinguish them from each other as sharply as possible. On the contrary, the aim of topology is rather to locate single theories in relation to each other in a field of scientific knowledge. For instance, communicative planning theory represents a way in which planning and planning processes are to be understood and exercised as a social task, while incrementalism, for example, has a much stronger reference to action and is directly action-guiding. The peculiarity that planning sciences, compared to other disciplines, always exhibit a high degree of action orientation and that this is simultaneously reflected on different theoretical levels serves as a first differentiating feature in the Topology of Planning Theories (fig. 2): Planning as an expression of a society (social theories) on a macro level, planning as an expression of a specific activity and task in a society (holistic planning

theories) on a meso level, and planning action as an expression of specific activities to influence or control the future (action oriented theories) on a micro level.

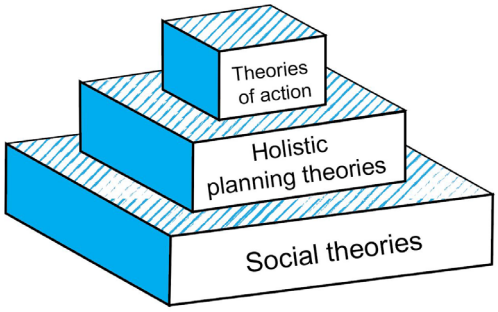

Figure 2: Multi-levels of planning theories (own illustration)

3.1 Grand theories based in social sciences (social theories)

Planning theories that stem or can be derived from a changed understanding of society (and the state) are referred to as social theories in the Topology of Planning Theories. In planning science, social theories serve to represent the embedding of planning in an overall social system. Strongly influenced by normative knowledge elements, the question here is how we want to live as a society. Social theories try to capture central features of society in concepts. For instance, the capital-critical ideas of Marxism determine a fundamentally different role and understanding of spatial planning than the discourse ethics of Habermas. At the same time, social theories are always a source of inspiration also for the planning sciences and planning itself, in its task as a public authority to help shape societal challenges - e.g. ideas about the city of tomorrow. Usually, social theoretical approaches are only partially transferred to the field of planning sciences, according to the principle of "best fit" or "pick and choose". Planning theories tend to be embedded in these social theories, or build on them as a fundamental understanding (as underlying level of the pyramid). What is challenging here is the often utopian character of social theories, such as what a Marxist state should look like and what role planning should then play, or how consensus-oriented planning should also be implemented in politics (discourse ethics).

Social theories are relevant to the planning sciences for several reasons: First, they describe the society or a utopia of it in which planning processes are organised and institutionalised. Depending on the reference to a social theory, the goals, contents and methods of public policy therefore also change. Thus, against the background of discourse ethics (Habermas), decision-making processes differ significantly from rational planning processes - especially with regard to participatory approaches or the social legitimisation of decisions. Second, following on from this, social theories have an influence on the definition of the tasks of planning. They influence attitudes, values and self-conceptions of the individuals who are socialised in this society, all within planners.

3.2 Holistic planning theories

Holistic planning theories attempt to describe planning as a holistic practice and to grasp it as an overall construct. These theories try to understand spatial planning as an agglomeration of actions, but without giving too much normative orientation. Rather, they are decisively based on descriptive knowledge. This is based on the idea that systems and their properties are to be considered as a whole and not only as a composition of their parts. Although planning and its practices are analysed in subcategories, planning as an institution, practice and action cannot be fully understood from the interaction of its individual parts. This requires a superstructure, i.e. strategy in strategic planning or culture in planning culture. The holistic claim of holistic theories results from the attempt to analyse and understand planning as such, with a certain frame (or lens). Either cultural theory or strategic management theory frame planning as such and identify cultural or strategic elements to describe planning practice. Fig. 2 shows that this meso level of planning theories builds on social theories, but does not contain any concrete recommendations for action due to its holistic approach.

In this context, holistic planning theories make an important contribution to planning science in many respects: First, holistic planning theories are neither utopian in character nor directly action-related, but refer to descriptive-analytical forms of knowledge about spatial planning. Some holistic planning theories also serve as a means of critique of existing planning practices or approaches. For instance, while the analysis of planning cultures in different European planning systems reveal the structural and institutional differences in how planning is constituted, the wider impact of planning cultural practices can be understood and explained in conjunction with cultural interpretation and understanding of roles. Second, it is striking that these holistic perspectives of planning can be identified predominantly in retrospect. Through retrospection, actors, actions and processes can be traced, but a form of controllability of the future is rarely involved. Thus, the claim of communicative planning can be exemplified in past planning processes, or planning cultural configurations can be identified, but a direct controllability of the future is not depicted in these planning theories.

3.3 Action-oriented planning theories

Planning theories that provide concrete guidance for action are described in the Topology of Planning Theories as theories of action. They describe the procedure of planning in concrete planning steps, phases and processes. Planning theories that can be read more or less concretely as instructions for action are decisively based on regulative knowledge for controlling planning processes. Starting from the rationalistic approach of synoptic planning, some of the approaches have been further developed as a critique of it, as a reality check of rationalist planning, so to speak. Theories of action translate theoretical frameworks into concrete instructions for action. In doing so, the theoretical framework is not directly defined with it, one can rather think of it as the underlying social theory and the holistic understanding of planning embed the framework for the concrete planning tasks, but do not deterministically prescribe the course of action: thus, incremental planning, i.e. planning step by step, is based on the holistic idea that planning functions as a political process. Then planning as a political process provides the basic understanding, and incremental planning translates this into concrete guidance for action.

This micro level of planning theories points out how the future could be planned and foreseen. They are characterised by their more or less action-guiding nature, focused on practices. It is about how planning processes can be carried out and

in most cases implies a narrow understanding of planning, the public authority planning. This becomes clear in the synoptic planning model or in incremental planning theories such as muddling through. A crucial characteristic is the orientation towards process designs, cycles or linear. Their differentiation according to linear process steps or circular, less linear processes with learning loops, is merely important for the internal distinction. Due to the degree of concretisation, these theories of action prove to be very useful for planning practice and in the teaching of planning sciences.

3.4 The field of planning knowledge

This first order systematisation of planning knowledge along the specific action-orientation allows a specification of the object of knowledge, either societies as such, planning within societies or planning as concrete and precise steps of implementing normative ideas of a desired future (multi-levels of planning theories, fig. 2). In a second order systematisation these theoretical pyramids can be located in the field of planning knowledge (fig. 3). Or, in other words, the pyramids of theoretical levels in planning sciences have different positions within the field of planning knowledge. Whereas the field of planning knowledge is described primarily in terms of the respective being of the planning theory, i.e. what constitutes the inherent understanding of planning, in terms of knowledge, i.e. what the planning theory can know and recognise as knowledge, and in terms of the degree of normativity, i.e. what planning should do. Each of the three dimensions of scientific theory are inherent parts of planning theories and enable differentiated positioning in relation to other theories and scientific approaches. The three dimensions are closely linked in the theories and often result from each other, for instance a consideration of future-relevant knowledge always plays on a strong normative orientation, because the desired future is already a valuation: whether it is the green city or the smart city vision. The dedicated aim of locating theories in the field of planning knowledge is to present the perspective of the respective theory, its inherent knowledge, its opportunities, but also its limitations. The location in the field of planning knowledge is decisively determined by the question of the extent to which several realities are recognised and how they are dealt with (ontological dimension). Ontological questions deal with a number of basic questions, e.g. about existence, being and becoming or reality. In relation to planning theories, basic ontological positions become interesting when it comes to the recognised realities, i.e. planning practices. Questions of this dimension refer to which realities are (not) recognised in the respective understanding of planning, how spatial planning deals with other realities and who, how and what is planned. What is decisive is the being of planning and the recognition of other (planning) realities and practices. Three different manifestations of theory can be derived in its pure form, rationalist planning theories (assigned to (ontological) realism), critical realism (based on critical perspectives of a joint reality at least) and constructivist planning theories (based on social constructivism). The shape of planning theories thus reflects the relationship between built space or technology - i.e. a plannable reality - and individual or social behaviour or societal consequences. Classically, theories of rationalist planning and communicative planning are often described as paradigms in planning sciences, and describe two extremes in the continuum of one and several realities recognized.

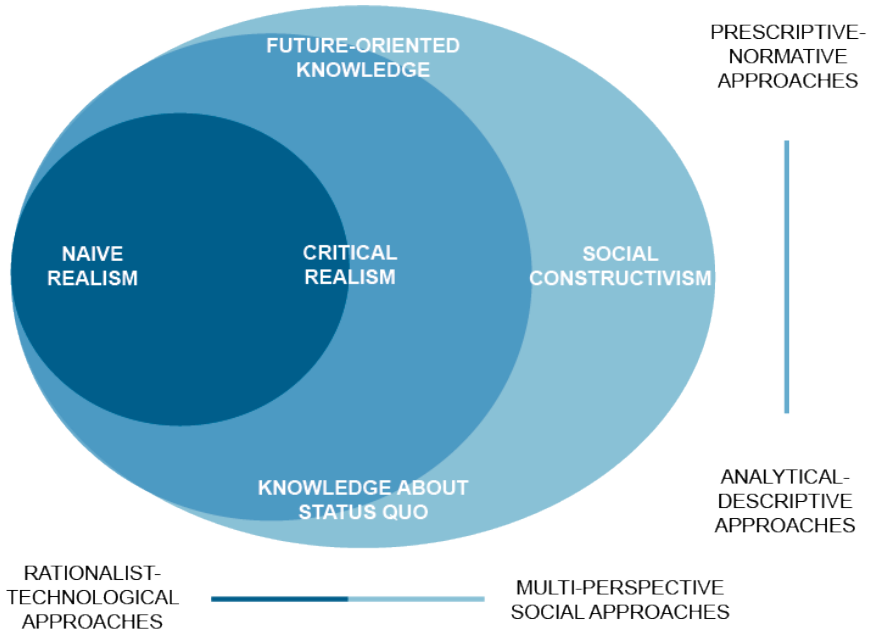

Figure 3: Field of planning knowledge (own illustration)

Naive Realism in planning theories: If the theory assumes one single reality that is measurable and sufficiently describable, the respective planning theory is located in the realism realm and emphasises a rationalist understanding of planning. Here, the planner collects all available and required information and argues with the help of (apparently objective) logic towards a decision. It is the ratio, i.e. an intellectual performance, on which decisions are made and which legitimises them. For this, the bases must be as objective and clear as possible; calculations and measurements are particularly suitable, such as density, accessibility, or socio-demographic surveys, which can usually be expressed in numbers. The ontological shape reveals itself in the question of what reality is represented and in particular how the desired future can be (objectively) described and made measurable. In terms of content, a rationalist perspective is expressed in theories such as the 15-minute city or spatial types according to population density. While the former is based on findings of accessibility and can thus be measured in terms of distances and time required, the latter is due to the subdivision of urban and rural areas according to population density.

Social constructivism in planning theories: Planning theories introduce further perspectives on reality that go beyond one's own perception of a reality and require dealing with it. The planning theories that can be classified here - and this includes the majority of modern and postmodern planning theories - require dealing with different constructions of reality and strongly understand planning as a social process of negotiating different constructions of reality. These are represented by planning theories such as communicative planning, which involve a multiplicity of actors and thus realities that uncover these realities in joint processes and must be taken into account in planning. Here, the degree of recognition of these multiple realities varies from an acknowledgement to a development of a common reality as a basis for decision-making and planning. In terms of content, theories such as Spatial Justice should be mentioned here, which refer to social justice issues and different constructions of reality. Methodologically, these need to be captured and discussed socially, in participation procedures and joint learning and decision-making processes.

Critical realism in planning theories: The position of critical realism assumes that a real world exists and can be explored and experienced. Unlike naive realism, however, critical realism recognizes that the world is not immediately and directly recognizable through human perception, but is significantly shaped by human cognitive processes. For planners, it follows that all perceptions must be critically examined and the respective fallibility of perception by human senses must be addressed. In many cases, it cannot be conclusively clarified whether a perception is right or wrong, but instead it must be made transparent that such a final decision often cannot be made and that there is at least the possibility that a perception considered to be true or right can nevertheless be wrong. This makes it all the more important to explain the foundations and assumptions on which decisions and strategies are based.

4. Concluding remarks

With the Topology of Planning Theories, we establish a denser interlocking of planning theory with regard to its theoretical presuppositions and its reference to action than has been the case so far. In previous approaches to systematising planning theories, dichotomies are usually opened up, as in the comparison of substantive and procedural theories. As fruitful as simplification and demarcation can be at the theoretical level, it does not adequately reflect the interrelationships in practice and does not do justice to the interconnections in theory. As already indicated, not only do the different understandings of planning already reveal epistemological positioning (e.g. with the question of how many realities are recognised), but the dimensions of knowledge contained in planning theories also play a fundamental role for the basic theoretical assumptions. Building on a detailed presentation of both the scientific-theoretical foundations (realism and social constructivism, etc.) and the types of knowledge in planning (future and present, ethical-normative orientation, etc.), we have developed a tool for clearly presenting these basic assumptions and thus inherent potentials and limitations of individual theories - especially in their relations to each other, in the theoretical field of planning knowledge.

The presented Topology of Planning Theories, introduces a systematisation that reduces the theories in planning to their basic components. With the attempt to break down the different epistemological aspects of planning theories and thus to describe theoretical fields in planning science, modes of operation and claims to validity of the theories are made explicit and existing dichotomous representations are at least weakened. This is explicitly not a typology, i.e. the consideration of typical features constituting a certain class or category, but a topology, which relates the considered aspects to each other (in this case planning theories with regard to their ontological and epistemological basic assumptions). The different levels of planning theories presented at the beginning of section 3 (the pyramidal structures) can be positioned in the field of planning knowledge, thus emphasising their relations to each other. Basically, the Topology of Planning Theories provides a framework to deal with the presuppositions of planning theories and their respective concrete elaborations through theories of action. Therefore, the links between the different theories become clear. The Topology of Planning Theories nevertheless contributes significantly to a dismantling of implicit systematisations of planning theories and reveals the interrelations of planning theories with each other, according to their inherent knowledge than has been achieved in previous systematisation approaches.

Lastly, the Topology of Planning Theories represents a reordering of knowledge for planning in the 21st century. Numerous challenges, be it the impacts of climate change and adaptation and mitigation strategies or societal polarisation and the question of appropriate decision-making, require a rethinking and reorientation of planning approaches. To realise this, an

ontological turn in planning science is needed. The focus on what constitutes planning is a necessary preliminary step to successfully turn off at the bifurcation described above. Only in this way can the urgently needed foundation be laid, which is necessary for the theoretical considerations. Before forms and sources of knowledge are discussed and normative implications debated, conceptual clarity must be established and the respective understanding of planning made explicit. The Topology of Planning Theories is an important first step in this process. It enables a systematic presentation of different approaches to planning theory, which often stand side by side on an equal footing and are compared with each other, even though, they have different goals and practical orientations. In this respect, the Topology of Planning Theories should not be seen as the solution to the problem, but as a preparatory part of potential pathways for thinking. It is an instrument to disentangle and order the different threads of planning theory. Building on this, further theoretical considerations can then be made, which should contribute to an authoritative understanding of spatial planning.

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