Chapter 9
Planning for Sustainability: Between Risks and Lifeworlds

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9.1 Introduction

There are distinct paradigmatic understandings of sustainability in planning. The ethos of sustainability has, over the last 50 years, risen to become omnipresent on national and international agendas. The question is, however, if it has also lost some of its edge, meaning and purpose on this journey. Sustainability in planning is often focused on risk assessment and boundary setting of economic development, based on expert knowledge and professional assessments by planning institutions. This chapter seeks to explore if citizens' participation in planning can contribute with a lifeworld oriented perspective that can unfold an understanding of a sustainable planning horizon with a broader scope of "development". Lastly, this discussion is reflected in the role of the university as provider of education to professional planners and societal developers.

Sustainability is one of the most pressing concerns in our modern society. All types of societal policy, planning and development are in different ways influenced by the sustainability agenda (Wallimann 2013). The universities as institutions and educators are no exception to this global discourse (Carroll and Janke 2013). Given that the primary role of the university is to educate academics and professionals, it makes sense that the sustainability agenda also influences the content and perspective of the disciplines taught. This is perhaps especially important in the discipline of planning. Planning is directed at balancing different human interests and values, to assemble and generate knowledge, facilitate processes of collaboration and development: and therefore inherently deals with sustainability (Cowell and

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Owens 2011). The question is though how universities can enable future policy makers, planners or developers to work with the ambiguous and tensional field of sustainability.

The ethos of sustainability has grown along with the recognition that the exploitation of nature (as a resource) for societal development has limitations, and irreversible environmental consequences for the existence and formation of future societies (Elling 2008; Nielsen et al. 2010; Woodhill and Röling 1998). The understanding of sustainability, in this sense, reflects the inherent relationship between nature and society, and links perspectives of human development to understandings of the boundaries of the planet and ecosystem (Nielsen et al. 2010; Rockström et al. 2009). Further, sustainability is also a concept that emphasises the necessity of change in our societal developments trajectories, and thus contains a future orientation (Sachs 2010). However, as discussed in the introduction of this book, the very concept of sustainability embodies a range of different paradigmatic understandings of nature and society and their interrelation. This diverse, and sometimes contradictory, conceptualisation of sustainability becomes especially perceptible when broad policy viewpoints are translated into particular planning processes that relate distinct interests, values and knowledge claims in a specific materiality. Sustainability may provide a common ground of understanding as an abstract concept, but represent a variety of distinct interpretations (and thus potential conflicts) when translated into definite terms and concrete actions (Cowell and Owens 2011).

This chapter problematises how the concept of sustainability, together with other established "truths", has the potential of being exploited as or by an authoritarian structure where certain institutions and actors dominate the discourse of sustainability without a broader democratic debate (Elling 2008). Such authoritarian structures can qualify some types of knowledge that we can call *knowledge regimes*, actors, and perspectives over others, and neutralise the potential deliberation of the subject matter (Deetz 1992). These concerns are relevant in the discipline of planning (Meadowcroft 1999). Due to the pressing concern of issues related to pollution, climate change, and biodiversity loss, the concept of sustainability has become a powerful idiom in societal policy and planning processes (Cowell and Owens 2011; Meadowcroft 2007). This generates situations where the planning trajectory, in the name of sustainability, is reduced to calculating risks or determining boundaries to societal development, instead of unfolding and discussing alternative perspectives for societal change.

This next section unfolds and discusses different understandings of sustainability in relation to aspects of participation and knowledge in planning. Hereafter we present a short case of environmental planning in Norway, to illustrate some tensions and contradictions of sustainability as protection and boundary setting in relation to local citizens' everyday life perspectives. Then we discuss the discipline of planning, and the sustainability tensions between calculating risk and opening critical utopian planning horizons, arguing that planning as a mean to reach increased societal sustainability is a constructive process of reorienting development paths, through deliberation of different and often diverging perspectives and

understandings of a variety of actors. Lastly we discuss how universities as educators of planning professionals and societal developers can deal with this inherent political tension in societal development. Our main argument in this relation is that the education of planning professionals ought to explore different social and environmental (ontological) perspectives of sustainability, and develop broad epistemological (and methodological) understandings of participation and the use and production of different types of knowledge in planning. Thus, in our perspective, mutual competence building implies in practice overcoming an unproductive conflict between different knowledge regimes.

9.2 Description

9.2.1 Sustainability Between Risk and Lifeworld

The report *Our Common Future* (World Commission on Environment and Development 1987) was the first international policy document that lifted the sustainability challenge out of the realm of activist niche policies and onto the international agenda (see also the introduction of this book). The concepts of sustainability in the report are broad and inclusive, but have also been criticised for not being more critical of the existing growth paradigm of economic development, and its influence on natural resource exploitation (Nielsen and Nielsen 2006a; Nielsen et al. 2010; Sachs 2010). This critique further argues that sustainability has developed into a discourse of concern for the environment, but without a critical edge of challenging the existing societal system, market rationality, or "western" lifestyle (Sachs 1999; Shiva 2006). The interpretation of sustainability can, as discussed in the introduction to this book, be divided into a pragmatic perspective of reforming existing society, and a more radical perspective of creating fundamental economic and social changes. This critique of the pragmatic reformist sustainability discourse can, in a planning perspective, be related to the division of sustainability into an economic and ecological interest-logic and the belief in objective regulatory sustainability measures. In this discourse, sustainability becomes "reduced", from the broad ethical and normative questions of freedom, equality, and justice of societal development, to concern measurable ecological aspects of nature i.e. ecosystem services, biodiversity, carbon emissions, etc. (Clausen et al. 2010; Harste 2000). It thus changes the essence of sustainability, to become a question of socio-ecological resilience (Berkes and Folke 1998; Folke 2006a) based on certain nature values. In addition it nourishes a policy and planning perspective concerned with balancing measured ecological indicators and societal development trajectories within the (human defined) planetary boundaries (Rockström et al. 2009). In practice sustainability planning becomes about regulatory means in relation to measurable objective indicators. Social values, cultural traditions, and even economic aspects that relate everyday life with a physical place

can, within this sustainability framework, become disqualified and illegitimate claims when set against ecologically measured sustainability, and the global risk of tampering with planetary boundaries (see also the discussion in Chap. 2 about human care as an essential element for understanding sustainability from a non-scientific perspective).

The division of nature and society also influences what type of knowledge is considered relevant in environmental decision making and planning (Brunner and Steelman 2005). The current development of environmental discourses is fundamentally influenced by the ontology of natural sciences, and contributes to the globalisation and consolidation of certain nature perspectives (Hironaka 2003). Natural sciences and the technical measurement of the physical-ecological dimension become providers of "objective" knowledge for rational planning and decision making (Brunner and Steelman 2005; Cowell and Owens 2011). Other types of knowledge concerned with socio-cultural or economic aspects, or even aesthetic and moral dimensions of a lifeworld-based knowledge, are considered less relevant within this logic (Elling 2008).

The domination of ecological measures and natural (positivistic) science transforms the agenda of sustainable development into a matter of planning societal development in relation to ecological risk (Harste 2000; Sachs 1999; Clausen et al. 2010). The challenge of sustainability in such an understanding becomes more concerned with how to protect nature from the current societal development trajectory based on ecological expert knowledge, and less concerned with a democratic sustainable societal development (including deliberations of how we want a future society: and what quality of life is). On a policy level, this has nudged development from the broad environmental concern for sustainable development towards a more instrumental policy perspective of securing certain "measurable" nature qualities like biodiversity and ecosystem services (Cowell and Owens 2011) or guide societal development according to indicators of planetary boundaries (Rockström et al. 2009). This logic generates a situation where scientific knowledge dominates, while the democratic values and lifeworld perspectives are unaccounted for in the decision making and planning arena.

Trust in science and scientific knowledge is a basic paradox in modern society, where the science that is thought to solve our problems is also an inherent part of defining and creating the problems (Elling 2008; Szerszynski et al. 1996; Woodhill and Röling 1998). This is especially relevant within the sustainability agenda that literally requires new ways of thinking to cultivate future oriented societal trajectories. The definition of sustainable trajectories cannot be exclusively based on scientific exploration, instrumental policy measures, and expert knowledge-based management. Sustainability is a question of iterative reflections and deliberations about our societal ethics, morals, and values, and about how our societal actions (broadly speaking) have impact on our environment (Cowell and Owens 2011). The core concern is how societal development perspectives can be balanced with environmental concerns (Cowell and Owens 2011; Innes and Booher 2010; Meadowcroft 1999), without being reduced to a process of mere risk assessment.

9.2.2 Planning Sustainability: Theoretical Considerations

Planning is in practice the intermediate state between policy making and governance, and the management of existing relations and institutions. Planning processes relate and discuss ecological, social, cultural and economic values and interests with different claims of knowledge and formal institutional power (Cowell and Owens 2011). A planning process is the operationalisation of certain policy goals that leads to some sort of outcome like a management document, regional plan guidelines, or institutionalisation of an agency (Innes and Booher 2010). A planning process is also influenced by the actors who participate; actors who are capable of generating new knowledge about the situation and new meaning horizons through reflection. Planning is thus ideally a (democratic) process that continuously generates trajectories or horizons for societal development. The planning process should in this sense be understood as "unfinished" or continuously moulded between different developing knowledge claims and meaning horizons (Nielsen and Nielsen 2007).

The sustainability agenda in planning can be interpreted as an institutional answer to cope with the societal sustainability challenges (Elling 2008; Meadowcroft 1999; Nielsen et al. 2010). Environmental planning is thus the operationalisation of sustainability policies that aims at protecting certain nature values that can deliver ecological benefits and thereby balancing some of the unsustainable traits of modern society (Cowell and Owens 2011). Such regulation also influences socio-economic and cultural aspects, and creates contested claims between different nature-society values and interests. One of the main challenges in planning is to balance societal development perspectives with ecological concerns (Cowell and Owens 2011; Innes and Booher 2010; Meadowcroft 1999) in a process that *also* opens future potentialities for societal and everyday life improvements (Healey 2006, 2009). This challenge has, as we explore in the following section, been met by broadening two fundamental aspects in planning: public participation and diverse knowledge generation.

Environmental planning has traditionally been orchestrated by state agencies through implementing national policies in particular areas (Carlsson 2008; Sandström et al. 2008). Such processes can be understood as top-down steering approaches, where environmental authorities define the purpose or the outcome of a plan in relation to stated national policies and based on the prevailing natural scientific knowledge (Björkell 2008; Brunner and Steelman 2005; Innes and Booher 2010). During the 1980s and 1990s the legitimacy, efficiency, and outcome of the expert-oriented, top-down nature protection policies and government have been increasingly challenged (Dietz et al. 2003; Hajer 2003) and criticised for ignoring the relationship between the socio-cultural and ecological dimensions of nature and landscapes (Berkes and Folke 1998; Folke 2006b). Public participation has during the last 30 years become a common ingredient in environmental planning processes as a way to increase legitimacy, reduce conflict, and thereby increase the effectiveness of policy implementation. Further, public participation

has been considered a mean to improve and widen the knowledge base for decision making (Innes and Booher 2010). But, despite the presence of a local participation ethos in environmental planning, participation in local communities is not very well developed in practical terms and is still contested and conflictual (Björkell 2008; Daugstad 2011; Grönholm 2009). The question is what local participation approaches with the intention of increasing legitimacy and reducing conflict are *not* able to answer when it comes to issues about sustainability.

One common problem could be the underlying institutional presumption that participation is merely a tool to fulfil the planning system purpose rationality (Elling 2008). Participation based on an instrumental-legitimising rationality creates an ethical democratic deficit and participation fatigue, i.e. people become uninterested in participating in pre-ordained planning processes, and this further erodes the democratic essence of planning (Cooke and Kothari 2001; Elling 2008; Nielsen and Nielsen 2007). Rational instrumental participation arguments thus limit the planning arena to a concern by the actors (experts or stakeholders) that are considered relevant from the planning system perspective, i.e. those that have the right knowledge and can serve to fulfil the purpose of the plan. The very deliberation of values and knowledge about the subject matter (i.e. sustainability or how to develop more sustainable societies) is reduced to negotiations about setting boundaries to the societal use of nature.

Local citizens are connected to the nature and landscape through numerous relations of economic, social, cultural character, and of aesthetic, "embodied", and practical dimensions (Clausen 2011; Daugstad et al. 2006; Nielsen and Nielsen 2006a). Participation of citizens in planning is, from a *democratic* perspective, not just a measure to increase policy legitimacy or to increase effectiveness of policy implementation. The perspectives of local communities are important, because they constitute the practical material relation to nature and society, and their perspectives can contribute with a substantial *different* perspective in planning (Elling 2008; Nielsen and Nielsen 2007; Vasstrøm 2014). The argument is not that local citizens have a "better" perspective of sustainability, but that they can contribute with different perspectives related to everyday life than a pure institutional perspective. A search for sustainability must therefore also be a question of how the diversity, ambiguity and normative dimensions of the everyday life can contribute with a different understanding of nature relations and in that sense (co)generate distinct knowledge during the planning process (Elling 2008; Healey 2006; Nielsen and Nielsen 2006a).

The theoretical point argued is not that either planning professional or local everyday life-oriented perspectives have the "solution" to nature protection or sustainability. Rather, the point is to illustrate that, quoting Elinor Ostrom (2008), "there is no panacea" to these complex challenges of nature society relations, neither scientific, technocratic, nor local. The argument is that if the goal is to improve sustainability in the long run, it is necessary to generate a more democratic platform for environmental planning that can open local and scientific perspectives towards new understandings and co-production of new knowledge. Participation is, in this sense, also a matter of developing substantial knowledge about the particular

situation that can improve the sustainability of the planning outcome (Healey 2009). Such collaboration requires that local perspectives are involved in a more nuanced manner than through the mere premises of technical planning categories or premises of expert agendas.

An important issue to have in mind when promoting the participative approach to planning, is the critique of collaborative planning as consensus building. Two approaches to planning and democracy have dominated the theoretical evolution of the planning field since the late 1980s and early 1990s. One approach is the model of deliberative planning and democracy, in which the search for consensus has been at the forefront (Healey 2006; Innes and Booher 2010). The other approach has evolved as a critique of the obsession with consensus in the planning regime within deliberative democracy, with ontological and epistemological reasoning about the need to expand the field of politics (Flyvbjerg 1998; Mouffe 2005). This approach politicises planning issues, and thereby facilitates an ongoing debate in which we accept that the social is structured by elusive and ephemeral discourses, i.e. an agonistic model of planning and (radical) democracy (Bond 2011; Hillier 2003; Mouffe 1999; Pløger 2013).

The theory of communicative rationality (Habermas 1984) and the subsequent theories of collaborative, communicative, and deliberative planning have been criticised for several reasons (Lysgård and Cruickshank 2013). First, they have been criticised for their insufficient perspective on power. It fails to conceptualise politics as a struggle between collective identities or systems of meaning and denies the inherent power of individuals. Second, it is criticised for its rationalistic premises, and especially for assuming neutral or rational dialogue. Politics is better characterised as decision-making in an 'undecidable terrain' than as a fully rational procedure. Third, the theory of communicative rationality has been criticised for its universalistic aspirations. When consensus is the main objective, the theory becomes a moral theory in which the goal, as a principle of social change, is an ideal commonly shared understanding of what values are most desirable. This is problematic because it presupposes a worldview in which a final consensus or answer is possible, whereas planning in practice demonstrates that consensus in fact always is incomplete, contested, and exclusionary. As an alternative to communicative rationality, the model of agonistic planning based on the view that consensus is always incomplete, and all pretence to consensus can and will be contested. Antagonism is therefore an inherent part of the social and should also therefore be inherent to planning: '*Moreover*, *antagonism under this formulation is inherent in the social and possible in every social relation*: *it is the essence of politics*' (Bond 2011, p. 168).

Agonisms, and planning beyond the purpose orientated consensus, might be especially relevant within a sustainability discourse where there is no objective answer and where interests, values and knowledge claims will generate opposing and conflictual trajectories. A planning arena can within this understanding form different legitimate, although contradictory, knowledge and value claims as part of the democratic debate.

In the following section we will illustrate the conceptualisations about planning, participation and knowledge in a case about nature protection in Southern Norway, and analyse how the planning arena opened and closed for scientific and local everyday life oriented perspectives of nature protection and use.

9.2.3 Environmental Planning and Nature Protection: The Case of Heiplanen

The nature protection rationality has during the last 100 years changed from a romantic aesthetic perspective of "being in nature", to a scientifically founded argument of protecting biodiversity for the resilience of the ecological system on earth (Vasstrøm 2013; Cowell and Owens 2011). The question is however, if nature protection as "risk-based-boundary-setting" will facilitate a sustainable societal development trajectory, or simply create protected "islands" of nature to compensate for the general unsustainability of society at large. Conversely, it is meaningful to question if approaching the caretaking of nature as part of everyday life and societal development could bring forth other understandings of sustainability in environmental planning.

The aim of the research on Heiplanen was to understand the tensions between different conceptualisations of sustainability, different knowledge paradigms, and different nature relations. The research approach sought to understand the situation through observations, interviews and engagement with both local communities (citizens and municipalities) and planning institutions (county government and County Governor). In that way the research analysis explored the dissonances between different perspectives during the planning process. The research objective was on the one hand to develop knowledge about a planning process from different perspectives. On the other hand it was a way of "disturbing" the institutional planning logic of Heiplanen through participatory reflections between different actors to explore the possible openings and closures for new orientations in the planning horizon. The research approach was in this sense a critical utopian action research that combined the ontological perspectives of action research (Greenwood and Levin 1998; Reason and Bradbury 2001; Svensson and Nielsen 2006) with the critical and dialectic epistemology of critical theory (Nielsen and Nielsen 2006b). The methodology interactively creates knowledge with the actors involved in the case through collective exploration and reflection.

Heiplanen was a regional environmental planning process in the years 2009–2011 in southern Norway commissioned by the Norwegian Ministry of Environment in 2007. The plan had two objectives, first to secure the habitat of the wild reindeer; and second to explore rural development possibilities. The planning authority was delegated to a municipal and regional political steering board, responsible for a joint regional plan across 18 municipalities and five counties (12,000 km^2). However, the commissioning letter emphasised that all decisions

should be taken on an "(. . .) updated natural scientific knowledge ground". And that the main objective was to determine boundaries for human activities in relation to the biological habitats of the wild reindeer (Ministry of Environment 2007).

The formal planning process was started with an introduction of a map of the potential wild reindeer habitat in the region based on biological, ecological and historic knowledge (Mossing and Heggenes 2010). The formal planning process was hereafter directed at summoning the municipalities to negotiate the categorisation and boundaries of the map between rural development zones and the wild reindeer habitats. The planning process instantly generated severe conflict in several municipalities that had literally 99 % of their area affected by the plan. The majority of the municipalities argued that the introduction of the wild reindeer map in connotation with the knowledge premise had already defined the planning outcome before the process had even begun. They argued that it became impossible to even open a discussion when the natural scientific based boundaries were already drawn on a map. The initial part of the planning process was influenced by frustration and conflict between the municipal authorities and communities on one side, and the county planners and county governors on the other.

The researcher entered the formal planning process during this initial phase in 2009. After a few meetings with county and municipal planners and politicians the researcher suggested the facilitation of three future creating workshops for citizens (Nielsen and Nielsen 2006b) in the municipalities that were most affected. The workshops were arranged in the three Setesdal municipalities in May and June 2010. The intention with the future creating workshops was to create a space for critical utopian deliberations about the nature-society subject matter for citizens unrestricted by the pre-defined planning purpose and categories. 60–80 people attended the three workshops in the three municipalities. The workshops opened for a generation of perspectives (or knowledge, values, relations) about nature protection and wild reindeer management in relation to "the good life in Setesdal: now and in the future" (Vasstrøm 2013). The themes developed in the workshops treated different aspects of nature and community, but together revealed how interconnected "nature" or the area was in their thinking of "community" (Vasstrøm 2014). First of all, the use of nature was seen as a cultural practice and a key value of living in the area. A concrete example was the concern for education and formation of the local youth in relation to nature understanding and use, as a potential to strengthen local nature identity. Such local identity was again related to more responsible nature use, and place identity and thus the potential to re-attract the youth after their tertiary education in larger cities. Another, but related, theme was concerned with the strengthening of the local capability and competence of nature management through the establishment of local knowledge parks. Such strengthening was not only considered a remedy to improve nature management, but also a way to develop workplaces and forming better nature practices in the local community. These perspectives included the local experimentation and monitoring of for instance the revival of traditional Seter agriculture as a remedy, to explore if such practice created ecological niches for the wild reindeer feeding potential. The workshops thus presented different perspectives of nature protection

planning and management that were connected with a community vision of re-vitalising the nature responsibility in the communities, and thereby ensure a more long-term commitment to sustainable nature management in the communities (Vasstrøm 2013).

The results from the workshops were presented on the formal Heiplanen planning arena during two regional planning sessions with municipal and county planners and politicians, and the environmental managers of the county governors. These presentations and following table discussions between municipal authorities and county planners and managers opened a new space for discussing nature protection as something different than setting boundaries on a map. The discussions did not create consensus about the planning purpose or outcome, but it created increased acceptance for other legitimate perspectives on nature. In this sense the perspectives developed during the workshops and the presentation and discussion at the regional plan arena facilitated a communicative bridge between the everyday life understanding of living in an area, with the professional and natural scientific categorisations of the area (Vasstrøm 2014). In the following months the researcher and the county planner encouraged the municipalities and county governor to discuss the planning outcome through dialogue meetings. Though reluctantly at first, the municipalities and county governor met five times during 2 months to discuss and draft the final planning outcome: the planning document and area boundaries. During 2011 these were politically approved in the five counties.

9.3 Discussion

The story of Heiplanen is in many ways a story about how a nationally commissioned regulation plan creates conflicts and disputes between different meaning systems and interests. Further, from a collaborative planning perspective, Heiplanen can tell a story about how dialogue can generate improved mutual understanding, and reduce conflict and reach some sort of consensual planning proposal. However, as discussed in the theoretical part of this chapter, it can be questioned if such area regulations improve the sustainability of the nature society relations in the particular area. Heiplanen is in this sense also a story about how a purpose of setting regulatory boundaries between society and nature can shadow the potential of deliberating other perspectives of what nature protection (or sustainable development) can be from an everyday life oriented perspective.

The formal planning purpose of Heiplanen was to create a plan document that could be accepted by national authorities within a given time frame. The national policy discourse of nature protection was in this sense "reproduced" and naturalised as an issue of setting boundaries to human activity and wild reindeer habitats. The formal planning arena was not able to open and be challenged by "other" perspectives of nature protection. The participatory processes in Heiplanen were an attempt to bring different rationalities into play on the planning arena. The process revealed that there were willingness and potential to unfold such diversified nature

protection perspectives. However, deliberations about local engagement and responsibility as a form of nature protection, was not considered plannable within the pre-defined planning purpose rationality. The planning arena closed for the generation and enactment of other values and understandings of nature protection, related to the (future oriented) everyday life perspectives such as youth education, strengthening of local identity, creation of local knowledge centres, etc. The dialogue development (or collaboration) between municipalities and county planners and governors was able to create some degree of consensus and craft a more legitimate planning outcome (the document and area boundaries), but it was not able to include and develop community perspectives that transcended the initial planning purpose of boundary setting.

If the planning arena is reduced to negotiate categorisations defined by the planning system, or interests defined by stakeholders, and only aimed at communicating *within* the planning institutional logic, it can seem meaningless (and impossible) for the public, as citizens, to contribute with their everyday life perspectives of the subject matter (Nielsen and Nielsen 2006a; Clausen 2011). The question is then whether to discuss democratic participation and sustainability within or transcending the existing nature protection planning rationality (Elling 2010). As the introduction of this book unfolds, this is related to a pragmatic or radical understanding of sustainability. Within environmental planning it is relevant to question if a plan document or the establishment of boundaries are proper means to nature protection or sustainability, or if such boundaries only serve to protect islands of nature against the general unsustainability of the society (Cowell and Owens 2011). Planning could also be a potential of deliberating contrasting (or agonistic) nature-society perspectives that might generate new orientations in societal development. This challenges the planning process to foster openings *between* system and everyday life perspectives, experts' and citizens' understandings.

The argument is therefore that the planning system must be able to open up reversed participation where citizens and communities are considered legitimate contributors of different perspectives and agendas to the subject matter than what is (pre)defined by the planning system or expert definitions (Nielsen and Nielsen 2007). The argumentation for citizens' participation is not just a matter of procedural legitimacy in planning, but a matter of encouraging citizens' emancipation and social responsibility for society (Nielsen and Nielsen 2006a). Such can only be developed when citizens are genuinely recognized and involved in what they consider a meaningful deliberation about the subject matter (Nielsen and Nielsen 2007).

These perspectives elucidate the tension between the collaborative and deliberative understanding of public participation in planning, and the potential for allowing agonistic perspectives in the process. The collaborative perspective is concerned with a "relevant" public or stakeholders that can contribute to understanding the complexity of the situation. Such participation is concerned with balancing and negotiating established interests or perspectives towards an agreed planning outcome. The deliberative perspective, on the contrary, is concerned with

bringing the public into play as something different than interest holders. It is an attempt to enrich the democratic planning arena, and the substantial outcome with different rationalities from the institutional or interest based rationalities (Hansen 2007).

This discussion of the public in planning is perhaps especially relevant in the search for sustainable societal development trajectories. Planning has to acknowledge and encourage the participation of the broader public, exactly because they can contribute with perspectives that are not "visible" within established scientific, bureaucratic, or interest based discourses (see also Chap. 2 on understanding reality through human care). The opening of broader public participation in planning is, in a processual sense, a matter of developing citizens' emancipation and responsibility for the common matter of concern, and in a substantial sense a matter of generating different development perspectives to the societal trajectory (Vasstrøm 2014).

The example of Heiplanen demonstrates how a planning process commissioned by the national authorities became focused on answering a natural scientific knowledge premise. The planning process was directed at crafting a planning proposal that could be accepted by the national authorities. The proposal was thus focused on boundaries to secure the wild reindeer habitats according to the natural scientific knowledge perspective. The planning process was thus framed by those knowledge claims that had been delegated the power to define the right outcome. The encounters between local and regional planning actors in Heiplanen revealed significant discrepancies between their understandings of protection and use, and the type and role of knowledge used to define these concepts. The dialogical knowledge development between municipalities and county governor generated improved understandings between the actors involved, which led to a gradual acceptance and recognition of *different* legitimate perspectives to the area. The understanding of the area was thus moulded between ecological perspectives of the area as a wild reindeer habitat, and the local perspective of the area as part of a broader life matter. Although this process of knowledge co-production improved the understanding of the area, and influenced the setting of the boundaries, it could not change the fact that natural scientific knowledge was still the main premise for defining protection and use.

The challenge of natural scientific claims in planning is not related to the quality of knowledge as such. It is its relation to the institutions of power and its utilisation as a mean to reach a certain purpose that is the challenge (Elling 2008; Pløger 2013). This is especially relevant in environmental planning where natural scientific knowledge has the status of a superior truth that can provide answers to complex challenges (Brunner and Steelman 2005; Pellizzoni 2010). However, the dialogical development in Heiplanen illustrates the importance of recognising the dynamic potential of knowledge in planning. Knowledge should in this sense not only be considered a means of power, but also a democratic potential for learning across different "knowledges" (In't Veld 2009). Such potential presupposes the ability of the planning arena to involve and legitimise different knowledge perspectives, different knowledge production methods and even regard the participative process as an arena of co-production of knowledge.

The argument of this analysis is thus that if environmental planning is a search to reach more sustainable trajectories, then the planning arena should be able to address nature as something more than ecological or economic interests or categorisations of protection and use. It requires a planning arena that can address nature as a common matter of concern between bureaucrats, scientists, politicians and citizens. This implicates the ability to address nature and society relations through a variety of knowledge and value perspectives, as well as an acceptance of their equally legitimate orientation. In this sense it requires that the public in planning are allowed to challenge and broaden the initially set purposes of the planning institutions and the expert perspectives on the subject matter, even though these might be radically different. This argument is not only furthered because such deliberations constitute a prerequisite for a democratic planning arena, but also because they generate the potential for developing new and different approaches to nature-society relations that may be more sustainable than what currently exists.

9.4 Conclusion

9.4.1 Sustainable Development as an Open Political Field

The sustainability endeavour cannot be reduced to a question of estimating risk of the current trajectory, and defining the "right" direction based on expert perspectives and knowledge. Sustainability can similarly not be reduced to a matter of balancing existing perspectives, knowledge or interests through collaborative efforts between "relevant" stakeholders. Sustainability requires a future orientation of the societal trajectory and is therefore in essence a democratic challenge (Elling 2010; Clausen et al. 2010) that needs to be engaged in an open political discussion. Sustainability cannot only be pursued by risk assessments, scientific modelling or technical means to avoid an inevitable dystopia (Harste 2000; Sachs 1999). Sustainability also requires hope, reorientation and creation of new perspectives, and therefore the necessity of bringing different rationalities into play (Nielsen and Nielsen 2006a).

This is one of the main aspects of the modernity paradox that is discussed by a broad range of reflexive thinkers; we cannot face the sustainability challenges by dominating the social trajectory with the same kind of knowledge totalitarianism that has contributed to their formation (Elling 2008, 2010; Nielsen and Nielsen 2006a; Szerszynski et al. 1996; Wynne 1996). Sustainability endeavours must be a question about generating different and alternative perspectives of existing rationalities (knowledge, interests, values, norms). It is, in other words, difficult either to instrumentally or collaboratively meet the sustainability challenges with the same logic that, in many ways, has paved the way for the present situation. The existing expert and institutional rationalities must therefore be challenged through other ways of thinking in order to open other horizons.

This argument of dialectics in planning raises the potential of the utopian horizon in planning. Instrumental and collaborative planning approaches often become reduced to answering to the initially set purposes of a plan. The objective of fulfilling the purposes of a plan thereby becomes a matter of either producing rational-instrumental and authoritative decisions and implementations, or a question of (collaboratively) negotiating and balancing existing interests and values towards a mutually agreed compromise. However, if nature protection is an answer to the ethos of sustainability, then it should also embrace and encourage the generation of development trajectories or planning horizons other than the purpose of planning institutional objectives. Such different rationalities of nature and society, or sustainability, can be introduced through a lifeworld or everyday life perspective of the subject matter (Elling 2010). The knowledge developed from the everyday relation between nature and society can contribute with aspects of nature protection that a pre-defined planning purpose might not be able to "see". Further it can develop human commitment and responsibility to nature beyond the lines on a map (Vasstrøm 2013).

The challenge in planning is to use these antagonisms as productive forces, rather than excluding them via a consensus-seeking process. It is necessary to see differences and conflicts as productive and to respect different views and values not as generating friendship or animosity, but rather as a valid component of the planning process (Flyvbjerg 1998). Planning becomes '*a place for strife about legitimate options and meanings on the road to reasonable and commonly agreed solutions or consensus-building among mutual adversaries*' (Pløger 2013, p. 72); decisions based on consensus are still possible, but the agreements reached will be temporary compromises in an ongoing process that continues based on debates about differences.

The legitimacy of diverging views and different political positions becomes very important in the discussion of sustainable development, since the hegemonic environmental discourses are fundamentally influenced by the ontology of natural sciences as the "proof" and "fact" that becomes the "objective truth" and measurement for rational planning and decision making. The challenge in sustainable development is actually to keep the political field open for deliberate processes and political debate. The ability to withhold intensity and passion in a participatory democracy depends on the space generated for agonisms as a legitimate part of the democratic debate (Mouffe 1999). To create a truly deliberative democracy, we should consider that the right to engage in conflict is a crucial freedom (Lysgård and Cruickshank 2013).

9.4.2 The Educational Role of the University for Sustainable Planning

As discussed in the introduction of this book, there are many examples of how universities, scholars and students have initiated and influenced large scale societal changes. However, the role of the university is not a uniformly defined concept, but an evolving debate with many different aspects of how higher education institutions can contribute to societal discourses and development. In this sense, as with other big conceptualisations: sustainability and the role of the university contain many different and contrasting (and even conflicting) ideas. In this section we will mainly address how the university as educators of planning professionals and societal developers can address sustainability. We therefore ask what kind of knowledge should be taught and how.

The overall argument in this chapter demonstrates that the concept of sustainability in planning cannot be taught as an isolated subject. Rather, the understanding of sustainability must be taught in relation to the broader ontological, epistemological, methodological and theoretical conceptualisations in the planning discipline that encourages reflections about sustainability as a cross disciplinary concept. In the following we list six main aspects that we consider fundamental for building a critical reflexive understanding of sustainability in planning:

Philosophy and methodology of social and natural sciences: To understand the complexity of the sustainability challenges in both a substantial and processual sense, it is essential that planning professionals and societal developers acquire scholarship about the paradigmatic understandings and methods for the production of knowledge. Perception and reflexivity about epistemological and methodological aspects of knowledge is necessary to create awareness of how different types of knowledge can elucidate a problem, be able to analyse different knowledge perspectives and claims during a planning process, and to facilitate production of situational knowledge during a planning process. This point of learning is principally a reflexive foundation for understanding the essence of planning and sustainability, and for questioning their own role as planners in a particular situation.

Paradigmatic understandings and discourses about nature society relations: Students must become familiar with basic antagonisms and conflicts within the nature—society relationship. This involves learning about how nature and society discourses have developed during modernity, and how these are influenced by different aspects of historical developments, economic interests, cultural values, technological innovations, and knowledge claims. Such basic understanding gives a foundation for understanding and analysing different aspects of a particular situation before directing the planning purpose toward a specific goal.

Sustainability as a field of policy: In relation to the latter topic, it is important to acquire ability to link nature society discourses with ideological struggles of

power and how nature should be managed. This involves learning about how different perspectives in a political field relate to and discuss matters of nature-society segregation or integration, management as a collective societal task or interest based negotiation, etc. In other words it is raising awareness of what ideologies that influence the dominating discourses in the sustainability field.

Planning theory: Purpose, participation and knowledge creation: In addition to the more abstract and theoretically distanced concepts of nature, society, knowledge and power, planning professionals also need to learn about the processual aspects of planning. Planning is in this sense understood as a reciprocal process between policy making and knowledge creation that is directed at developing new societal trajectories (and thus open yet unforeseen horizons). This involves learning about how different planning processes are structured in relation to formal authorities and legal frameworks and different conceptualisations about how a planning arena can be formed. Further, it requires deep understanding about different theoretical perspectives on participation and participants, and methods for creating mobilisation and participation between different (agonistic) perspectives in particular situations. It is thus not only a matter of learning how to plan from A to B, but how that planning process can open for the production of new knowledge and improved (and in that sense sustainable) trajectories for societal development.

Governance and management of nature society relations: In any given society, nature society relations are embedded in a range of different vertical and horizontal formal and informal governance systems. Sustainability in planning is not only related to the substantial aspects of environmental, economic or socio-cultural concerns, but also to how these are managed and governed in a democratic and legitimate way in a long term perspective. Professional planners and societal developers should therefore acquire knowledge about how governance and management models can be crafted in a particular system: that generates long term commitment and democratic legitimacy.

Experiential learning, *problem based cases and participatory fieldwork*: to create understanding of the complexity and "wickedness" of sustainability in real situations. Students should experience how problems related to different aspects of sustainability (social, economic and environmental) are played out among different types of stakeholders (planning system, politicians, interests, citizens, etc.) during a planning process. Such experiences generate foundation for reflections between abstract conceptualisations and theoretical knowledge, and the complex reality of societal planning and change processes. An important way of teaching students about sustainability should therefore be based on direct experience through field studies and field courses, and problem-based individual or group-based work with case-studies that reflect 'real' planning issues about contested sustainability.

What we have learned from the case-study of Heiplanen and the following discussion about challenges of planning sustainability is that (future) planners

should be able to recognise the specificity, multiplicity, difference, and power-relations of the sustainability planning field in at least three dimensions. First, it should acknowledge the *complexity* of sustainability. It is important to look for differences in discursive positions as a strategy for producing knowledge in planning. To regard knowledge as constructed is a basic premise for planning also in the field of environment and nature. Second, we need to recognise that knowledge is *contested*. By defining the main contested issues of sustainability, the agonisms, the knowledge will initiate political debate that is and should be at the heart of planning for sustainable development. Third, in order to *represent all people*, and not least ordinary people's opinions about what is sustainable, it is necessary to co-produce the knowledge in collaboration with a broad segment of the population, representing a wide variety of interests in question.