

New politics for planning – introducing climate policy in Dutch and Danish planning cultures

Severine van Bommel¹, Anne Jensen², Wiebren Kuindersma³ and Anders Branth Pedersen⁴

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Abstract

There is a growing appreciation that global climate change is basically not a problem of environment, but one of politics and policies. Therefore, it is argued that the policy context in which climate change decisions are made must be considered. Using theories of strategic power in planning and of planning imaginaries, in this paper, we ask how the challenges of climate policy issues become integrated in the framing and mundane practices of specific local and regional planning initiatives. We build the analysis on two case studies of climate policy implementation in The Netherlands and Denmark, respectively. Our study shows how climate policy issues are introduced with a general push to realize climate sensitivity in particular [proof] regions and cities. This, however, faces obstacles in regional and local planning’s traditional sector divided institutions and existing cultures around sustainable development. The complexity of climate policy issues pushes for interactions across policy sectors and gradually adds to a reframing of strategic planning in our two cases. In the present context, we argue that planning practices taking on the challenges of climate change accentuate current movements towards a more politicised planning which acknowledges and is enabled by the power ridden nature of planning.

Introduction

There is a growing appreciation that global climate change is basically not a problem of environment, but one of politics and policies. Therefore, it is argued that the political context in which climate change decisions are made must be considered. As it is inevitable that any policy aimed at climate change mitigation or adaptation will interact with other sector interests, the importance of negotiation and interaction is increasingly recognized as part of the climate change policy making process.

In addition to this, the actual effects of climate change policies will depend on concrete actions taken. These actions are always local and have regional impacts. Hence, local and regional scales of planning emerge as targeted areas for climate change mitigation and adaptation. These scales of

¹ Communication Science and Forest and Nature Conservation Policy Group, Wageningen University and Research Center, Wageningen, the Netherlands.

² National Environmental Research Institute, Aarhus University, Roskilde, Denmark

³ Alterra and Forest and Nature Conservation Policy Group, Wageningen University and Research Center, Wageningen, the Netherlands

⁴ National Environmental Research Institute, Aarhus University, Roskilde, Denmark

planning are perceived to be well equipped to deal with detailed climate related problems, due to detailed knowledge of local affairs and policy-making cultures, skills in making local/regional strategies and in designing tailor made local/regional solutions (ref.)

However, these local and regional scales of planning increasingly face difficulties in coping with climate policy issues' complexity, characterized by the involvement of many actors with different backgrounds, interests and opportunities, and with sometimes completely different framings and perspectives of climate related problems and solutions. We may thus ask how climate policy issues interweave with planning's strategic practices and how this forms a particular basis for meeting the demands of climate change policy.

Using theories of strategic power in planning, we **ask how the challenges of climate policy issues become integrated in the framing and mundane practices of specific local and regional planning initiatives**. We build the analysis on two regional case studies of climate policy implementation in The Netherlands and Denmark, respectively.

In the paper, we demonstrate how climate policy issues are introduced with a general push to realize climate sensitivity in particular [proof] regions and cities. This, however, faces obstacles in regional and local planning's traditional sector divided institutions and existing cultures around sustainable development. The complexity of climate policy issues pushes for interactions across policy sectors and gradually adds to a reframing of strategic planning in our two cases. In the present context, we argue that planning practices taking on the challenges of climate change accentuate current movements towards a more politicised planning which acknowledges and is enabled by the power ridden nature of planning.

After this introduction, we outline our theoretical framework which is based on ways to address a politicizing turn in planning theory, based on post-structuralist emphasis on framing, imaginaries and practices. Then in the next section, we discuss how a particular regional Dutch planning institution manages to adjust its culture for planning and reframe the climate policy problems into new ways of planning a polder, the Zuidplaspolder. In the next section, we present the discussion of the Danish case study, where it is illustrated how the challenges at local level of handling climate policy issues are reframed and integrated into the spatial planning cultures in Copenhagen while this reframing at the same time exposes the shortcomings and blockings produced by traditional sector divides and a particular, consensus based institutional structure. The paper then discusses the joint findings of the Dutch and the Danish cases, before the general conclusions are drawn together.

Planning as political practice: framing and spatial imaginaries

In scrutinizing how the introduction of climate policy issues affects local and regional planning, we are interested in what actually happens in practice at these levels. This entails a concern for the daily representations and routinized activities in ordinary planning organisations⁵ and we are interested in qualitative responses and transformations (Orlikowski, 2000). Thus, rather than using large samples and following rigid protocols to examine a limited number of variables, this study

⁵ We depart from a sociological notion of institutions (e.g. Giddens, 2001) which includes norms, roles and practices whereas organisations are actual and can act, through its members, in policy processes. This paper however, is not the place for taking this discussion further or for addressing the organisational level of planning.

requires an in-depth, qualitative examination of specific instances or events. As such we will draw insights from the ways that climate policy issues affect planning institutions in two qualitative case studies⁶. To enable this, the case studies were built on common theoretical perspectives that were adapted to the individual case (see Flyvbjerg, 2006; Murdoch 2006). For the case analysis we thus developed a shared framework which is introduced in this section.

For decades, critique of ‘the’ modernist planning paradigm has been voiced within a number of approaches to planning. As a common emphasis, these authors have argued that planning is also a political activity. Davidoff’s critique in the 1960’s pointed at planning’s basic and widespread assumption of planning being neutral with respect to values, and arguing against this, he called for planners to be aware of and voice their values in public debates and planning initiatives. Such an implicit obligation assigns a task to the planning profession to engage in social issues as ‘advocates’ of particular interests, neighbourhoods, etc. (Allmendinger, 2002: 138-139; Davidoff, 1965). Thereby, Davidoff pointed at an ethical dimension to the planning profession, also pushed further in contemporary planning theory debates by e.g. Heather Campbell, who stresses the ethics of planning. Ethics are a core concern of planning exactly because planning’s purpose is to alter the world that it plans, and this intervention produces different outcomes for different groups of citizens (Campbell, 2003). Building on this basic point of departure, in a democratic perspective, collaborative planning further has stressed the role of communication and of the particular design of process that should involve those affected by planning. The nature of planning practice is characterised by communication and communicative practice, and thus also knowledge. With an explicit focus on the establishment of communicative arenas, on the building of deliberative processes and on the application of knowledge, collaborative planning include the micro-politics of planning embedded in daily planning work and practices (Healey, 1993, 2003, 2006; Innes and Booher, 2003).

In this paper, we also argue for planning as a political activity, however from a different point of departure. We see climate policy issues as deeply implicated with the networks and flows, complexity and transformations that characterise our present societies⁷ (Amin and Thrift, 2002; Degen, 2008; Healey, 2007). We thus lean on a relational thinking that emphasise the power exercised in the very definition of policy issues and in those perceptions of the world in which these policy issues become problems that need to be addressed by planning (Flyvbjerg, 2001; Huxley, 2004). This is a relational power which is omnipresent, productive and is intimately linked to the rationalities of planning and governing (Foucault, 1978, 1979; Richardson, 2006) and which is deeply interwoven with the framing of planning. This framing underpins daily planning work and practices, and involves particular ways of understanding through the inclusion of relevant forms of knowledge.

⁶ Data for the case studies were produced through qualitative policy document analysis and in-depth, face-to-face, semi-structured interviews. For a fuller account on the methodology and on other aspects of the case studies, please see Bommel and Kuindersma, 2008, Jensen and Pedersen, 2009, and Mickwitz et al, 2009

⁷For the development of our argument, it is of lesser importance whether the present stage of modernity is termed post-modernity, late modernity, second modernity or another, appropriate, notion – the key thing here is a transformation away from post-war, nation based, industrial societies towards the social being marked by a recognition of processes of globalisation, complexity, multiplicity, flows, networks and a changing role for the nation state and new forms of governance

Framing and reframing

With complexity as a key feature of the present urban/regional condition and experience, *framing* provides a way to order the chaos of reality and make sense out of the wide range of possible interpretations within the particular sociality that forms the institutional setting of planning/policy-making. It is a sense-making activity that through its narrative function is crucial for policy making/planning/governance (Laws & Rein, 2003); it so to say draws up the mental map for planning to work with particular policy issues. In this sense, framing also has a mediating role, as it bridges between different social actors involved in the planning field or between the policy/planning problem and the possible actions and initiatives to address it (Laws and Rein, 2003:xx). Framing demarcates the sense-making field where planning rationalities operate. This paper investigates framing as an interactional process of sensemaking instead of taking a more cognitive approach to framing (Dewulf et al., 2009). Although we recognise that cognitive structures certainly play a role in how frames are brought to an interaction situation, what really matters in this paper is how frames are enacted in ongoing interactions. Our point of departure is that although not always consciously, but nevertheless actively, people construct specific frames in interaction in order to be able to act and interpret the world around and e.g. reach specific goals (Aarts and Van Woerkum, 2006). As Entman puts it: “to frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described” (Entman, 1993: 52). When we understand verbal communications, images, etc. as specific forms of texts, this means that as such framing is always a strategic activity.

Spatial imaginaries

Following Patsy Healy (2007, forthcoming), planning rationalities are reflected in the *spatial imaginaries* on which a plan or a strategy is based and which are substantiated when included in the work with e.g. strategic plans for and visions of the future city or region. Spatial imaginaries delimit the way spaces and places are perceived and thought within a particular planning institution. In this way she notes how “an urban ‘region’ is not a ‘thing’ to which an analyst can approximate an ‘objective’ representation. It is an imagined phenomenon” (Healey 2007: 28). These socio-spatial imaginaries are thus a social construct, situated in a particular social and historical context which changes over time. In drawing up the sense-making mental maps for particular planning/policy issues, they co-determine the governmental measures and material actions taken to realise the plan.

Leonie Sandercock further stress how these socio-spatial imaginaries thus are underlying for planning work itself and shape the range of possible outcomes of planning (Sandercock 2004). Without these imaginaries, it would be hard if not impossible for planners to work. Within Foucauldian governmentality analysis, e.g. Dean (1999), Jensen and Richardson (2007), Huxley (2003, 2006) and Rose and Miller (1992) emphasise the shaping power of the domains of knowledge upon which governing (or political) rationality is based. It is through these forms of knowledge that planning’s imagined subjects, spaces and forms of intervention emerge, take shape and form a rationality of planning and a logic of intervention. This rationality, the logic, is thus embedded in policies, plans and strategies, and these can be seen as governmental representations of the planning rationality.

Thus, imaginaries represent a particular way to view the world which is institutionally based and which through planning’s rationalities shape a particular logic of intervention. Those socio-spatial imaginaries are emblematic for the particular planning rationality which is part of local planning

institutions. As demonstrated by e.g. Flyvbjerg, planning rationalities are decisive for planning's outcome and for the social implications related to actual planning initiatives, e.g. as with his classic question of 'who gains and who loses' (Flyvbjerg, 2001). It is thus also a contested field where discourses, rationalities and practices create tension and, at times, clash (Healey, 2007: 23; Jensen, 2006; Watson, 2001).

Mundane politics of planning

With socio-spatial imaginaries as an immanent part of framing, expressing particular conceptions and values and expressing governmental logics, the framing is in constant evolution, often gradually and unnoticed. Laws and Rein have demonstrated how the process of reframing in itself can initiate changes of governance and planning (Laws & Rein 2003:xx).

For planning institutions to evolve, then, it requires also a change of framing, or a reframing, which denotes a process that involves shifting the parameters within which sense is made out of the world and with which planning meets on daily basis (Healey 2007: 25). In other words, reframing requires new ways of thinking, based on the inclusion of alternative forms of knowledge or different ways of combining and interpreting knowledge at hand. In this sense, the socio-spatial imaginaries and the framing and framing practices are foundational to urban-regional strategy formation and have real effects, amounting to a 'politics of knowledge' (Healey, 2007: 27).

Thus, our analysis of the two case studies is based on a common approach which captures the framing and reframing of local and regional planning and governance. The framing of planning denotes what is thinkable in planning and thus the condition of possibility for planning's interventions in the social. Crucial effects of policies that meet the radical challenges of climate change in an urban or a regional setting, can thus be scrutinized through pursuing the processes of reframing that are pushed by the new policies and planning initiatives. The framing emerges in those socio-spatial imaginaries which underpin actual planning initiatives and practices. Such a reframing entails potentially new ways of thinking (e.g. planning initiatives and governance of climate relevant areas) and which contest, alter and/or interweave with existing planning institutions. What this produces in real terms depends on the situatedness, historicity and the particular complexity of particular planning institutions, and is thus intrinsically an empirical question (Murdoch, 2006). Below, we examine this through our two case studies.

Climate governance in a Dutch polder and a Danish metropolitan city

The above outlined joint analytical framework thus places emphasis on planning as a political activity that also happens in the mundane practices of planning institutions and which is deeply entrenched in the ways in which particular policy issues become embedded in planning imaginaries as these e.g. are represented in strategies and plans. Armed with this perspective, we now turn to the analysis of our two cases of integrating climate policy issues in the planning of a Dutch polder and of a Danish metropolitan city.

Developing climate adaptation policies in the Dutch Zuidplaspolder

The Zuidplaspolder, an area of reclaimed land lying in the triangle formed by the cities of Rotterdam, The Hague and Gouda, is one of the deepest areas in Europe, about 6 m below sea level. Because of the vicinity of the cities of Rotterdam and The Hague, the polder is considered a very suitable for developments for houses, green houses and industrial areas. The area's low elevation and the anticipated increased future risk of floods, combined with development pressures from

Rotterdam and Gouda, have turned this area into one of the country's biggest adaptation challenges. But it's hardly alone: some 60 percent of the Netherlands, accounting for 70 percent of its gross domestic product, lies below sea level. As the climate warms and sea levels rise, the country aims to meet these challenges with a variety of approaches, ranging from complex engineering to natural accommodation of water, the Zuidplaspolder is a case in point. As the lowest real estate in one of the Netherlands' most vulnerable provinces, the Zuidplaspolder has become a test bed for factoring water and climate change into zoning and development plans.

In 1998 the polder was designated a development area to meet the need for urban expansion (including greenhouse green house horticulture) in the southern half of the Randstad. There was a large need for space for development in the Randstad area. The need for housing was so acute that it could not be accommodated within the boundaries of the Randstad area itself. Before selecting the Zuidplaspolder, experts on climate change were consulted with regard to the potential risks. This consultation did not include specific studies: they were just asked for their expert opinion. The representative of the Water Board, interviewed on August 5th 2008 in Rotterdam, remembered:

“Arguments related to climate change only played a minor role in the selection of the Zuidplaspolder. Also arguments related to water safety played only a minor role. Other areas such as the Hoekse Waard and the Green Heart had more landscape values. The Zuidplaspolder is a rather fragmented landscape. That is why the Zuidplaspolder was selected.”

After the nomination of the Zuidplaspolder as an urbanisation site, the provincial council took the initiative in setting up a multi actor platform in 2002 for coordinating the developments in the Zuidplaspolder. The multi actor platform consisted out 23 actors: various local governments, planners, water managers, transport companies, transportation managers, farming pressure groups and nature conservationists. This multi actor platform developed a master plan for the area in which economic activities (among others green house green house horticulture and urbanization) could go hand in hand with societal demands. The challenge was to find a development strategy for the Zuidplaspolder which would address the changing circumstances and requirements, while respecting those qualities which the Dutch as a society wished to retain. The stakeholders in the Zuidplaspolder were struggling with how to combine the prevention of further land subsidence with the increased demand for housing in the peat areas? How to combine water treatment (locally) with measures to prevent and combat desiccation (in an affordable way and within the framework of the EU Water Framework Directive)? How to combine water retention (for example water retention in 15% of the lowest areas) with urbanization?

The socio-spatial imaginaries underpinning the master plan

To prevent conflicts, the steering committee decided to take a so-called ‘layer approach’. This layer approach is a new instrument in Dutch planning It assumes that land use in the Netherlands may be regarded as consisting of three layers:

- The first layer is formed by the surface and consists out of water, soil and the flora and fauna of the areas
- The second layer is formed by networks, namely the physical network of railways, roads and waterways
- The third layer is formed by a pattern of land use such as agriculture, housing, nature, etc.

One cannot regard these three layers as completely independent, because they all interact with each other. The idea is that involving all three layers in the spatial planning can prevent conflicts between different users of the same land, as well as create greater coherence in the measures to be taken. In Dutch planning often urbanisation, intensive agriculture and other forms of occupation are regarded as separate, unrelated elements, without sufficient consideration to the demands created by the other layers. In the Zuidplaspolder – perhaps because of its low elevation - there was a strong awareness among the actors that water could also set intrusive constraints on long-term, sustainable location policies. They knew that they had to take into account slowly developing trends such as rising sea levels, higher levels of water discharge and more precipitation. They therefore decided to give consideration to the properties and functions of the surface layer and the network layer, as well as the structural significance of both layers. The environmental circumstances formed the point of departure to plan human land use. They used the climate change scenarios of the Royal Netherlands Meteorological Institute (KNMI) to formulate their vision.

“Common sense suggests that the low elevation of the Zuidplaspolder implies higher risks of flooding. This turned out to be an advantage in relation to climate proofing the vision. That is probably why the interests of water management were taken seriously right from the start.”
(representative of the Water Board, interviewed on August 5th 2008 in Rotterdam)

During the formulation of the Master plan, the multi actor platform decided that the urbanisation plans would be developed according to the conditions set by the Water Board e.g. by determining the space for water retention in relation to space for residential areas.

Tensions

All seemed well, until in 2007, the climate change hype caught on in the Netherlands. Al Gore had published his book and his movie was showing in all cinemas. In addition to that, a new ruling coalition had just hammered out the policies that would be pursued for the next four years. This new coalition was substantially ‘greener’ than the last one. In this context, a political discussion started about how ‘climate proof’ are these plans actually were. In the media questions were asked such as: Is it really wise to develop a new urban area in the lowest polder in the Netherlands? Wouldn't the risk of flooding be too high in case of a dike breach? What about the risk of flooding in relation to increased precipitation? Wouldn't the polder turn into a big bathtub? How much will it cost to keep the polder dry by pumping out water 24-7 in order to develop a residential area in this polder?

In response, the Province of South Holland decided to ask for a second opinion. Schieland en de Krimpenerwaard regional water board and ConSept worked alongside Zuid-Holland provincial council on sub-studies while Wageningen, Delft and Amsterdam (VU) universities provided the academic input. The researchers concluded that the fact that the Zuidplaspolder is one of the lowest areas in the Netherlands is not directly related to an increased risk of flooding. They concluded that the Zuidplaspolder is well protected from flooding as statistically the risk of a dike breach is very low: on average only once every 10.000 years a dike breach is expected to occur. Some other polders are much more dangerous to live in: some of their dikes have a statistical probability of breaching once every 2.000 years. Their probability of flooding is 5 times higher than that of the Zuidplaspolder. In relation to the height of the water level, in case of a failure of the sea surge barrier and a dike breach, the water level in the Zuidplaspolder is expected to rise to 1.3 meters. As most houses are built on mounds that are 1.5 meters high, flooding will cause damage but it is not a life threatening situation. The researchers also concluded that also in terms of water management,

flooding in case of heavy rain would not present a major obstacle (the bathtub effect) as sufficient water can be pumped out of the area. Instead the researchers concluded that a bigger challenge is provided by dry summers. During dry summers, water would have to be pumped into the Zuidplaspolder in order to prevent the soil becoming too dry, resulting in boils, blows and land subsidence. However, during dry spells, the water of the Hollandse IJssel is much saltier than usually. When the water table of the Hollandse IJssel is low, the salt water from the sea will go further into the river than usual. So when using this water, the Zuidplaspolder too will be confronted with brackish water. This will have consequences for nature and agriculture. Or as the representative of the Water Board, interviewed on August 5th 2008 in Rotterdam, stated:

“In relation to climate change, desiccation presents a greater challenge to us in terms of water management than flooding”

So from a climate change perspective, the water board felt that it would be perfectly safe to build houses in the Zuidplaspolder. The group of researchers concluded that the plans for the Zuidplaspolder were indeed climate proof with regard to flooding for three of the KNMI scenarios.

That is the point we are at now. Contrary to common sense, developing new residential areas in the lowest area of the Netherlands is not perceived as a problem in relation to climate change.

Reframing Denmark’s capital city of Copenhagen as a climate friendly and cosmopolitan metropolitan area

The city of Copenhagen is the capital of Denmark and has for the past years made efforts to become the ‘Climate capital of the world’, including an objective of becoming CO₂ neutral in 2025. At the same time, the city has a century old organisation which publicly is highly criticised for its fragmented nature. This makes the city apt for our case investigations.

Since the late 1940s, spatial development of the Greater Copenhagen Area has built on a strong socio-spatial imaginary, *the Finger Plan*, and this is still the foundation of Copenhagen’s spatial planning. *The Finger Plan* gained its name from its shape where the city centre forms the palm of the hand and an urban train system, the S-train system, each shapes out a finger around which suburban development has taken place and with green areas filling the area between the fingers. The strategy of the Finger Plan thus integrates the built environment – like urban neighbourhoods and business quarters, suburbs and city centres – with green spaces and urban and regional mobility infrastructures as well as it integrates the metropolitan city with nearby towns. Over the years, this spatial imaginary has ordered the metropolitan area as a coherent city-region. Transforming to post-industrial times, the municipality has recognized a move towards and a desire to become cosmopolitan as well as to nurture particular qualities of dwellings and urban places. Integration of climate policy issues interweaves with this redefinition of the City within the Finger Plan.

Following many other European cities, strategic planning has in Copenhagen since the early 1990s emphasised initiatives to regenerate residential areas of the central city. Further, a new urban mobility system has been initiated, with an urban metro system being the major new establishment. This supplements the basic structure of S-train lines running along the fingers, with metro lines running across and connecting these lines. Further, the metro system has added another finger to the hand, namely one running south to the international airport and to the Öresund Bridge connecting Copenhagen, Denmark, and Malmö, Sweden. This extension has pushed the construction of a new neighbourhood, the Örestad, along this sixth finger. A second novel and high profiled

neighbourhood is in the early stages of development, Nordhavn. The inclusion of this former industrial harbour area in the living city is enabled as most industries and sea transport of goods has moved out of the city, transforming the city to post-industrial forms. These developments have put pressure on the strategic planning of Copenhagen but have likewise created novel ground for redefinition of development.

In 2007, a new Ministry for Climate and Energy was established in Denmark and Denmark was elected to host the COP15 of the UN Framework Convention on Climate Change which was to take place in the city of Copenhagen in December 2009. This signalled a shift in national political awareness and acknowledgement of climate change issues. This resulted in national initiatives such as a national Climate Change Adaptation Strategy cutting across a wide range of policy sectors, a Climate Commission which was to produce state of the art climate policy recommendations, and the Energy Town Initiative where appointment as one of only three energy towns requires that a city pursues clear goals for energy related cuts in greenhouse-gasses and to be innovative and ambitious in concrete initiatives to reach this goal.

In this urban and national context, the city faces the challenges of climate policy issues. In the Municipality of Copenhagen, the national shift in climate policy attention coincided with the finishing of a new strategic vision for the city, the *Eco-Metropole* (Copenhagen Municipality, 2008). The *Eco-Metropole* is more the outline of a vision than a traditional city plan and charts the basic principles of what Copenhagen is envisioned to be in the near future. Until its preparation, climate policy issues were largely treated as environmental policy matters and subsumed under the city's strategy for sustainable development (Copenhagen Municipality 2004). While the spatial strategy on which *The Eco-Metropole* is based paid significant attention to climate policy issues, this happened without a marked differentiation between climate adaptation and mitigation policies. Climate adaptation issues received but little and fragmented attention, in particular within the areas of waste water and water, and in fragments in other policy areas⁸.

The socio-spatial imaginaries underpinning the spatial strategy

In *The Eco-Metropole*, climate change initiatives partly make up an actual climate policy and partly intermingle with other initiatives (Municipality of Copenhagen, 2008a). The climate policy sets a target for Copenhagen of 20 per cent reduction of CO₂ emissions by 2015 relative to 2005 levels. In the formulation of the subsequent Climate Strategy, this CO₂ reduction target was extended so as to also make the city CO₂ neutral by 2025 (Municipality of Copenhagen, 2009). In Copenhagen's climate strategy (2009), climate mitigation is perceived to be a central dimension of future urban spatial development and of marketing the city in the global city network as an environmentally friendly metropolitan city.

The issues that intermingle with climate issues can be summarized as granting priority to conditions for bicycling, a focus on educating the urban citizens on climate issues and on creating ownership to climate initiatives, and as part of the way the municipality as an organisation is managed. *The Eco-Metropole* marks a shift in urban strategic development.

⁸ E.g. in urban transport as when the entrance to the underground metro stations are constructed with an initial step up before the stairs descend to secure them against future floodings.

In the renewed strategic approach, one of the key rationales is the promotion of a green urban identity which is presented as building on a firm historical and cultural basis and surfaces for example in the wordings of recent planning documents in the city. This policy rationale rests on mutual benefits between sustainability and/or climate objectives and the culture of the city and Copenhagen's objectives for a future oriented urban development. It also rests on seeing capacities to mitigate climate change as an economic asset. As such, it provides an understanding of climate policy which rests firmly within an ecological modernisation approach (Hajer, 1995). Further, Copenhagen is articulated as a city that "demonstrates to others how a greener urban environment in practical terms lead to a better life" where "environment in the future should be even more the basis for Copenhagen's culture, urban life and identity" (Municipality of Copenhagen, 2008a: 3).

Another key policy document, *The Thinking City* strategic plan, weaves together sustainable neighbourhoods and urban reductions of CO₂ emissions. It lists measures taken or in the making which will add to reducing CO₂ emissions, in particular environmental traffic zones that limit the access to the medieval city centre for heavy traffic; a scheme for environmental assessment for sustainable urban development; localisation of housing and working places in proximity of metro and S-train stations; appointing neighbourhoods for low energy housing; investments in public transport and biking/pedestrian transport; restrictive parking; congestion charging; allotting spaces to expansion of regional train infrastructure; and marketing Copenhagen as an international role model for urban climate change policy.

Tensions

In most policy documents which engage with the spatial strategy sketched in *The Eco-Metropole*, urban transport and heating based on coal are singled out as problematic fields (Municipality of Copenhagen, 2008a; Municipality of Copenhagen 2007), and in the city's planning documents, the framing of these areas emerge from these potential tensions.

Copenhagen's energy system is based on plants which combine heating and electricity production whereby the energy lost in the system is greatly reduced. Also windmills play a role in its energy supply, with the second large scale sea wind mill park under construction. These systems are stressed as a showcase example of clean energy technology's role in reducing the city's CO₂ emissions, framed to serve multiple purposes, including CO₂ reductions, decreased energy supply dependence, adding to the city's green image and identity, and stirring green innovations (Municipality of Copenhagen 2007b, interviews). Also, specific policy areas target CO₂ reductions through a changed framing of urban strategic development. In for example *The Thinking City's* presentation of the specified action area of 'plurality in housing', urban spaces free of traffic are emphasised. Within the action area of the maritime city, existing S-train stations and new metro stations are taken into the development of the neighbourhoods in the harbour area and the new neighbourhood of Nordhavn is appointed a 'sustainable urban neighbourhood'. This implies that those urban developers who engage in remaking this part of the old industrial harbour face low energy building requirements and demands on design of spaces to public urban transport and biking.

Tensions are more evident in initiatives aimed at urban transport where we will highlight Copenhagen's attempts to establish a congestion charging scheme⁹. As a major initiative since the mid 2000s, the city's urban traffic policy includes plans for a congestion charging scheme which is highly politicised. Three aspects add to its tension ridden nature; it is by many experienced as a misplaced restriction of their private (auto)mobility, congestion charging requires a change of laws which the present government is unwilling to provide, and if approved the allocation of revenue is highly politicised (Jensen and Pedersen, forthcoming).¹⁰

Congestion charging is anticipated to reduce city car traffic with up to 10 per cent within a short time horizon and is argued to handle a number of transport-related problems at the same time, i.e. it is expected to reduce time consuming congestion, improve local air quality, improve the quality of urban space, provide funding for costly infrastructure construction and maintenance, and to decrease the strain on the overall environment caused by urban transport. The potential reduction of CO₂ is emphasised as an instrument that will help to achieve Denmark's international obligations to climate targets. Further, congestion is in itself stressed as a situation adding to increased levels of CO₂ emissions, and the revenue is also meant to finance public transport infrastructure (Municipality of Copenhagen, 2008b).

The revenue gained from the congestion charging scheme takes on a key role in the financing of new initiatives such as the neighbourhood of Nordhavn, the extension of metro system and extension of the motorways to the nearby towns, residential area of many commuters. For example, the construction of new motorways e.g. extending those 'fingers' not currently supported by motorways and a motorway tunnel beneath the harbour are included among the funding options. Historically, expansion of the road/motorway network has been followed by an increase in traffic in these corridors and such a scenario works against – i.e. is inconsistent with – the climate objectives of reducing transport related CO₂ emissions. Jointly, the overall rationale of reducing congestion highlights a tension in urban mobility. This surfaces as opposing trends of reducing city road traffic while concomitantly enhancing road infrastructures in the wider city region, encouraging more car traffic here (Goodwin and Noland, 2003) and thus increasing levels of CO₂ emissions. As in earlier publications, economic growth is still anticipated to produce increased road traffic (Municipality of Copenhagen, 2005b: 11)

⁹ A second area could be added, the biking policy: Since 2002, the overall objective of the biking policy has been to increase the modal share of biking in urban traffic from 36 to 50 per cent of work or study related travels by 2025 (Municipality of Copenhagen, 2008a). Initiatives such as extended infrastructure and parking, a bicycle bridge across the harbour, a system of green tracks and green waves for bikes in city traffic are envisioned to promote biking. The biking policy plays a central role in the arguments presenting Copenhagen as a green city that claims to be frontrunner in metropolitan climate mitigation and a future 'global climate capital'. The framing stresses how the culture of the city for decades has had bikes as a natural part of daily urban life⁹. Stories and visual images in the plans, policy documents and the municipal web sites, indicating the embedded socio-spatial imaginaries, illustrate how this part of Copenhagen culture stretches across age, social groups, occupation, etc. Further, it is emphasised how a large modal share of bicycle traffic in the city gives its public spaces an amiable, calm but vivid atmosphere. In the redefined spatial strategy, such spaces mark the liveable city, apt for an active urban life for families, the trendy workforce, etc. However, in a situation of limited urban space, bike lanes and bikes compete with private cars which are the dominant mode of traffic used by a large number of commuters in the city region.

¹⁰ This is also due to that congestion charging by the national government is framed as a taxation, thus per definition blocked by the government's foundational policy principle since 2001 of no-new-taxes

Discussion of strategic power of local and regional climate policies

In this section we argue that in both cases we see the emergence of a new, or renewed, spatial imaginary which was pushed and fed by climate policy issues. The emergence of these imaginaries and their inclusion in and gradual transformation of planning in the Zuidplaspolder and the city of Copenhagen can be interpreted as a response to the vast complexity, uncertainty and threat-like character represented by climate change issues at local and regional level. Further, the pervasiveness of these policy issues in a planning reality means that not only particular pieces and aspects in the framing of planning and its daily practices are changed but touches foundational ways to understand the role of the involved planning organisations as well as its respective region and city. As the planning organisation and particular actors are active in these reframing practices and purposefully engage in directing them, they are also to be seen as political practices. We return to the political nature and implications of the reframing practices in the concluding section.

Spatial imaginaries

Both cases illustrate how the planning of a polder and of a city is a social process which is dependent on and reflect basic spatial imaginaries. In the Zuidplaspolder, this foundational imaginary is represented in the *Masterplan* which is the outcome of the negotiation among multiple actors. In Copenhagen, it is most prominently evident in the *Eco-Metropole* document but surfaces as well in a number of other key spatial planning documents, originating in diverse departments.

The spatial imagination of the *Masterplan* was highly influenced by the choice to use a ‘layered approach’ (a political decision because of the water issues). In the heat of action, there was not just a single architect but several, no one decision-maker but a multitude, no single plan but ten or twenty which confront each other. Planning thus looked nothing like a linear process consisting of a series of compulsory stages. Instead in the planning process which took place over several years, the decisions – urgent or not, explicit or implicit – followed one another in their diversity and heterogeneity. This implicated a multitude of actors with dissimilar competences and projects, and each of them, as insignificant as they may have seemed at the time, turned out to be absolutely crucial at the end of the line. The process around the spatial strategy of the *Eco-Metropole* deviates from this fragmented picture. Here, the basic rationale merged parallel but not identical trends in different parts of the municipality and among private – residential or business – developers who saw a need to redefine city space to a post industrial complexity. As such, it does not challenge the foundational spatial imaginaries of the *Finger Plan* while the green colour of the *Eco-Metropole* and the emphasis on a joint but diverse city identity (Jensen and Pedersen, forthcoming) serve to renew it and for example make space for a diversity not hitherto articulated. This is reflected in the way the major urban development area of Nordhavn, the old industrial harbour, is approached. Here, as in the Örestad, the basic development rationale is mixed use and proximity to stations. As a new thing climate mitigation is also targeted, though to a far lesser extent, climate adaptation issues. Buildings with climate friendly technologies are imagined to enhance the quality of city spaces. The economic gains of these initiatives are emphasised, as well as its potential value on the ‘global urban catwalk’ (Degen, 2008). These are developed by municipal planners representing different municipal departments, in conjunction with private architects and developers and with public hearings. Calls for urban developers, and spatial planning integrate low energy housing requirements and systems of urban transport that minimizes CO₂ emissions relative to private cars when they outline the thinking behind the new/regenerated neighbourhoods.

The construction of the Zuidplaspolder *Masterplan* showed that planning and the creation of its spatial imaginaries was a social process where the form of the spatial imaginary turned out to be directly dependent upon the identity of the actors who participate in its development and the relations they maintain. The spatial imaginary was gradually constructed or deconstructed in social interactions by relevant groups. So the spatial imaginary continuously changed as actors entered or left the planning process. The spatial imaginary continuously transformed itself, constantly redefining its properties and its public appearance. As such the spatial imaginary, its content but also its chances of success rested entirely on the the actors in the network that interacted, negotiated and shaped the project. A different network of actors would have resulted in a different spatial imaginary. Since the spatial imaginary moved, by means of the reactions it provoked, from negotiation to negotiation and from redefinition to redefinition, everything was determined by the identity of the actors in the network.

The case of Copenhagen shows how transport policy as a particular, but in the strategic and in the climate context significant, policy area is closely related to the way spatial strategies and urban development are imagined. Embedded in the spatial imaginaries of urban strategies we find perceptions of the people whom are the subjects of governance¹¹ and who for example are pictured as mobile subjects (Dean, 1999; Jensen & Richardson, 2007). In the city of Copenhagen, the mobile subjects that the municipal transport policies address are highly mobile commuters that moves long distances to go to work, residents that use their city and cosmopolitan people from Copenhagen and abroad that value movement and flexibility in their working life and/or for leisure and e.g. flies between metropolitan cities. This is demonstrated not only in the texts of the transport policy documents but also in their illustrations and in the way transport policy is integrated in the strategic development initiatives that promotes Copenhagen as a metropolitan city in a global network of cities and as an ecological/climate friendly city. Such imagined subjects are framed to fit with the basic imaginaries of the renewed Finger Plan – as commuters that the proposed congestion charging and subsequent improved regional transport infrastructures and a more coherent city region will benefit. Both less motorized traffic (much of the metro is underground), climate friendly building technologies and decreased risk of flooding (larger capacity for waste water) are imagined to affect how Copenhagen is experienced and what the atmosphere of the city's spaces will be. These initiatives seek to increase the attractiveness of the city and mould behaviours of urban citizens, through working on how urban places and buildings, neighbourhoods and transport connections are sensed, felt and experienced by the people who move and live in these spaces.

Framing and reframing of regional and urban planning

In the Zuidplaspolder, climate policy problems were reframed into new ways of planning the polder: the layered approach. By framing climate change adaptation as a water management problem, water management was signalled out as noteworthy and a certain value or importance was ascribed to it. Complexity of the situation pushed for interactions among different actors with different sectoral interests on the platform. Each had its own views on what needed to be done, resulting in complicated negotiations and interactions. During these interactions, climate change was framed as a water management issue, confirming the power of the water managers. The water

¹¹ This entails reflections on the people that the policies are designed for; how are they expected to act, what makes e.g. a city attractive to them, what are their needs and desires, what does their everyday life look like, etc. (Dean, 1999; Jensen and Richardson, 2007)

managers already had a lot of power because everybody agreed that ‘keeping your feet dry’ was a pre-requisite for building in the Zuidplaspolder. With regard to the Zuidplaspolder *Masterplan*, decisions were made by the actors in the middle of uncertainties amongst which it is practically impossible for success to be guaranteed. The *Masterplan* or spatial imaginary was created in an unpredictable social and technical environment which no method, however refined, would have been able to manage to master completely. In the mid of the moment, the result of a decision or action by actors, in terms of failure or success, could not be foreseen: Everyone made the best decision based on the information available to them. In the end, this reframing of regional and urban planning was not uncontroversial. We can observe that the political discussion and the media hype (re-)opened the discussion on building in polders below sea-level. It questioned the way that the actors in the Zuidplaspolder reframed climate policy problems into new ways of planning, especially in terms of safety of the plan, and thereby also questioned the authority and legitimacy of the layered approach. This shows the different views on dealing with climate change issues in the planning’s traditional sector divided institutions and existing cultures around sustainable development: should be tackle climate issues “top-down or bottom up”?

In the case of Copenhagen, with the redefined spatial strategy, the sustainable development policy, traditionally crafted primarily in the Department for Techniques and Environment, was gradually transformed to a spatial strategy sensitive to a range of climate issues which to a large extent subsumed most of the urban policy issues hitherto framed within sustainable development, e.g. local engagement of citizens, waste, water, and housing. Significantly, the redefined spatial strategy further concerns the city as an entity, the municipality as a policy and planning actor and which increasingly includes climate change policy issues. Creating shared ideas are at the centre of governing rationality when common identities, educational aspects and creating ownership to the climate policy are integrated among the initiatives. Among urban policy-makers and employees this is indicated by the localisation of the work with the *Eco-Metropole* in the Department of Finance¹² and with ambitious climate change objectives being one of four specifically targeted areas which was also publicly targeted. The work with the congestion charging scheme was likewise placed in this department rather than in the Department for Traffic where all other urban mobility policies, such as the biking policy, are managed. This indicates political priority but also a reframing of control of urban transport into an area that cuts across the city’s policy sectors.

With Copenhagen’s proposed congestion charging that is integrated as part of the spatial strategy, the inclusion of a multitude of actors served a different purpose. Here, they were used to build a consensus based coalition between Copenhagen and the nearby towns on a highly contested issue. Further, the spatial strategy has been drafted in a cross-sectional working group. The working group included high-level civil servants from a number of sections and represented the seven administrations of the municipality. The Financial Department chaired the working group and crafted the main part of the strategy in close reference to the working group and for the key sections, policy-makers at lower levels worked with elements of the strategy in-between meetings in the working group. The idea was to create ownership across the large municipal administration and

¹² While the strategy of the *The Eco-Metropole* was developed through practices which were purposefully organised across the traditional sectors of the municipal administration, most initiatives that marks the transformation of the mid 2000s, e.g. urban mobility, energy (VE, combined heat and power), citizens, new identity, CO2 neutrality in Nordhavn, were not worked through at a cross sectional level of the municipal organisation but kept within particular policy sectors.

to embed strategic thinking of the *Eco-Metropole* in detailed areas of municipal governance. It thus in practice crossed policy sections and the historically sharply divided administrations of municipal rule. This can be seen to indicate efforts made by its architects to disseminate the strategic thinking of the *Eco-Metropole*, and to locate it throughout the municipal central organisation.

From the outset, the climate strategic issues were perceived to be cross-cutting the traditional administrative departments. Therefore, to ensure a joint understanding across the municipal departments, a kick-off seminar was held where all sections at the municipality were invited and a number of other sections and departments at the municipal administration were invited to join a working group. A second and equally expressed key rationale for this organisation is to create ownership to the Climate Strategy and embedded it in the daily work in all parts of the municipal administration, through a joint understanding. The wind-breaker for joining these diverse departments were, among other things, an framing within ecological modernism (Hajer 1995) which has spread pervasive in Denmark since the 1990s. Backed by this understanding, Copenhagen can be reframed as a climate conscious metropolitan area that is capable of responding to a unmanageable complexity and rate of transformation.

Climate change and reconfiguring the landscape of planning in the Polder and the City?

In the Zuidplaspolder, the reframing of the climate adaptation issues were based on the existence of a multi-actor platform. The functioning of this platform, however, did not really change due to the introduction of climate change and the climate policy issues did not appear as a new institution or a 'magic charm'. The particular form and practices of the platform already existed as part of the planning culture before the issue of climate change was introduced in the Zuidplaspolder. Instead, the climate change problem was reframed in such a way as to 'fit' the course of action/plan already agreed upon. Planning in the Zuidplaspolder was the result of emergent forms of organisation, both formal (the multi actor platform) and informal (media hype and political discussions). So the multi-actor platform was not in hegemonic control but neither were the actors operating outside its environment.

The introduction of climate objectives thus became interwoven with Reframing practices already under way in Copenhagen. These were related to the complexity of responding to present challenges – where climate change is one – and how the complex challenges were perceived on the background of the sector division of Copenhagen's policy-making and planning. *The Eco-Metropole* as well as sector documents such as the Agenda 21 Plan express a concern to change the planning culture and make it more responsive to future and changing needs. This concern pictures a city policy-making structure that seeks to reach across the traditional sectors and engage with comprehensive and strategic thinking and overcome the divides. A need for and a concern of such transformations of the municipal policy-making structure were additionally apparent in the interviews. Here the pitfalls of sector policy-making in a large administration were more directly and unambiguously expressed and addressed as one of the challenges for making climate policy initiatives at municipal level 'which actually makes a difference'.

Concluding – politics in planning for the climate

In our introduction we asked how climate policy issues interweave with planning's strategic practices and how this forms a particular basis for meeting the demands of climate change policy. We have examined how the challenges of climate policy issues become integrated in the framing

and mundane practices of specific local and regional planning initiatives. Our two case studies discussed above show how the demands of climate policy feed into, push but also are carried forward by political aspects of planning. Through both case studies, we have in particular unravelled two common aspects relating to the reframing pushed by the introduction of climate change.

Firstly, the case studies demonstrate how an actual inclusion of climate policy objectives in local/regional planning is intertwined with, on the one hand a reframing processes and on the other changed actual planning practices where both have the power to challenge and perhaps change planning's institutional and organisational platform. In social and often mundane interactions, actors together settle on how to perceive climate change's complexity in a local/regional context, define the problems experienced as well as possible solutions. Planning showed to be not a technical outcome but rather a social process.

The strategic spatial planning of Copenhagen for example showed to be based on climate policy issues that were articulated in the initial framing of strategic spatial development as put forward by e.g. *The Eco-Metropole*. In particular climate mitigation was perceived to be a central dimension of future urban spatial development and of marketing the city in the global city network as an environmentally friendly metropolitan city. The strategic planning in the Zuidplaspolder, for example showed how climate policy problems were reframed into new ways of planning the polder: the layered approach. By framing climate change adaptation as a water management problem, water management was signalled out as noteworthy and a certain value or importance was ascribed to it.

Such reframing processes happened as part of regional and urban formulation of policies and plans and they happened on the basis of the networked interactions of a wide range of public and private actors which formed around strategic initiatives such as the formulation of the *Masterplan* for the Zuidplaspolder or the Copenhagen congestion charging scheme. Influenced by the interactions of actors in these networks, reformulation of planning for the future polder in the Masterplan often developed in unexpected ways. For Copenhagen's spatial strategy, the introduction of climate policy issues served to unite a number of urban issues and actors.

Secondly, often organisations are seen as social units that try to achieve collective goals for the benefit of the wider society of which they are part (e.g. Reed, 1992). Our case studies have demonstrated that although the planning organisations indeed have produced formal collective goals, in practice, actual planning frameworks, strategies and initiatives often work in (loose or more strong) professional and personal networks. This networked aspect of planning has been emphasised by the need for climate policies in a context of complexity, and puts forward planning's political dimensions.

Our findings indicate that although official rules and procedures continue to play a certain role, even 'disorganisation' at a local level or 'lack of organisation' is rather about different forms of ordering/organisation with their own rationale. In the Zuidplaspolder, this has involved a multiplicity of networked arenas for working on the spatial strategy, forming a heterogeneous platform rather than a joint planning institution. In the city of Copenhagen, addressing the complex and multiple nature of climate policies has involved attempts to create shared perceptions and mutual ownership to the spatial strategy as well as its climate initiatives, through construction of networks across the traditional and strong sector division of the municipal organisation and reaching outside the municipality. Working on how to understand and respond to climate policy issues has here pushed a

reframing of spatial strategy for the Zuidplaspolder and the city of Copenhagen. What the Zuidplaspolder and Copenhagen *is* as a spatial entity that can and should be planned and governed has been transformed in the period of climate policy attention. Further, the basic organisation in sectors is challenged. In the reframing it-self thus lies a power which often slips in analyses that focus primarily on organisational aspects.

Thus, the spatial strategies of the contested *Masterplan* for the Zuidplaspolder and the more consensus oriented *Eco-Metropole* for Copenhagen and the tension ridden congestion charging scheme discussed above presents reframing practices which redefine the understanding of policy and planning in the municipal organisation and which potentially change this organisation in response so the cross cutting and complex issues of climate change. Climate policy is not developed and subsequently applied but its 'implementation' involves complex interactions between different 'developers', 'implementers' and their preferences, perspectives and interpretations (Yanow, 2000). Thus, climate policy does not present a pre-defined script that directly 'tells' the local actors what to do in planning (Orlikowski, 2000). Rather than imposing meaning in local and regional planning, it turns out to be the other way around: the meaning of climate policy is negotiated in interaction in local and regional planning. In other words, climate policies gain their meaning and shape when they are mobilised and enacted in practice (Law and Mol, 2002) and this is reflected in the indications of a gradual change of the planning institutions that emerged in the two case studies. As a result, introducing complex climate issues accentuates current movements towards a more politicised planning which acknowledges and applies the power ridden nature of planning in responding to climate policy challenges.

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