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Interactive environmental planning

creating utopias and storylines within a mobilities planning project

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Creating utopias and story-lines within a

mobilities planning project

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Abstract

This article presents a research project on mobility management in Danish municipalities aimed at creating more sustainable mobilities. The project, called Formula M (2011-2014), worked within sciences, public and private sectors, and civil society. Often contemporary projects in both planning and designing sustainable mobilities fall short when it comes to changing praxis to limit CO2 emissions, where they just concentrate on technocratic elements. They often neglect the 'why' and 'for what' which is needed in order to drive such change. In the Formula M project, focus has been on supporting the planners involved in the project on their 'why' and 'for what'. Based on a theoretical understanding of relational and collaborative planning the article contributes to an understanding of which approaches and methods can be used to facilitate the relationships and dialogues between many actors. Methodologically, this has been sought through a specific focus on the role of utopias as a tool for storytelling.

Introduction

The ideal of flow and 'zero friction' (Hajer 1999) still remains a strong criterion when it comes to planning the mobilities of today's cities. Simultaneously, the pressure on cities for reducing CO2 emissions is growing. For many projects the way out of this dilemma often results in an overall goal to initiate a change of praxis in users. But when the intersecting relations between society and transport – and how this (re)produces praxis – is inadequate, it is difficult to see how reduced CO2 emissions can be obtained (Urry 2007; Timms, Tight, and Watling 2014). The formidable role of the car as a provider of freedom and flexibility, perpetuated over the last 100 years, is not easily changed (Sheller 2004; Conley and McLaren 2009; Urry 2004; Freudendal-Pedersen 2009). Asking people to use modes of transport other than the car is basically asking them to change the 'system' of their everyday lives. Thus, reducing CO2 emissions through less car use is, for many planners, both an uphill struggle and a narrative difficult to engage with.

> "Therefore it seems plausible for many urban actors to strive for rather more efficient technologies and mobility systems than to consider the sustainability of social relations, cohesion, integration and connectivity as major goals of mobility policies" (Timms, Tight, and Watling 2014, 79).

The Formula M project is a good example of a project caught in this dilemma. This article tells the story of how actively using utopias while working with municipal planners opened doors for critical thinking about sustainable mobilities futures. The empirical outset is a Danish mobility-planning project, Formula M, which had the aim to develop sustainable approaches towards everyday mobilities. Through an interactive research methodology (Johannisson, Gunnarsson, and Stjerneberg 2008; Flyvbjerg, Landman, and Schram 2012; Svensson, Ellström, and Brulin 2007), utopias were created to work as a guiding light and process throughout the project.

Scientific approaches to develop practice-oriented research in issues regarding sustainability are a growing field, engaging a still greater number of scientific disciplines (Lang et al. 2012; Becker and Jahn 1999; Nowotny, Scott, and Gibbons 2001). The Formula M project focussed on trying to establish social change around the fussy, and highly diverse, concept of sustainability (Swyngedouw 2010), from an outset in the 'mobilities turn' which has put mobilities at the centre, in attempts to understand society within the last decade (Urry 2007; Hannam, Sheller, and Urry 2006; Cresswell 2006; Freudendal-Pedersen, Hannam, and Kesselring 2016). The methodology of the Formula M project was inspired by the critical utopian action research approach (Jungk and Müllert 1987; Aagaard Nielsen and Svensson 2006). Historically, utopian thinking played a significant role in city planning. An important analytical and reflexive trait of working with utopias is that it entails a critique of what is already extant, and of what we wish to avoid in the future (Pinder 2005; Harvey 2000; O. B. Jensen and Freudendal-Pedersen 2012). By thinking through new futures, awareness is put on what, in the present, needs to be changed (Dreborg 1996).

The article commences by outlining the theoretical outset for working within the Formula M project. The mobilities turn, and the work with utopias, have significant impact for the way the project's planner developed storylines to support the introduction

of mobility management projects in their municipalities. Subsequently, the Formula M project, and its empirical setting in Danish transport policies, are briefly discussed. Methodologically the work is inspired by critical action research where an active use of utopias and the creation of learning spaces have played a significant role. This has been pursued through a sequence of events with the planners in the Formula M project. In conclusion the paper touches upon the importance of actively using utopias and free spaces in the planning of cities and their mobilities.

Theoretical outset for research

Since the middle of the 1990s, the concept of mobility management has been advancing across several European countries with varying degrees of political awareness and institutionalisation (Portal 2012). The mobility management approach works with the social 'software' of infrastructures – the way organizations and people use technologies in order to get the most out of the 'hardware' offered by infrastructures and technologies (Möser and Bamberg 2008). Overall, the aim is to reduce the need for transport, thus influencing the choice of mobility towards less energy consuming modes and improving the use of existing infrastructure capabilities (Banister 2008; Graham-Rowe et al. 2011). The core idea is to influence travel choices of individuals through measures that address awareness, interests and rationalities of travellers (MAX Research Project 2008). This is done through local tailoring of several policy and planning mechanisms implemented in collaboration between local authorities, traffic companies and local organizations (Enoch 2012). The use of Mobility Management tools can be paraphrased in the following way: *avoid* (fewer trips by car), *improve* (more ecologically sustainable use of cars), and *replace* (use other modes of transport like cycling, walking and public transport).

Of course avoiding, improving and replacing are easier said than done. The mobilities perspective holds insights into the role of movement in everyday life and its significance for individuals and societies. The term mobilities stems from the emerging field of interdisciplinary mobilities research (Urry 2000; Canzler, Kaufmann, and Kesselring 2008; Hannam, Sheller, and Urry 2006; Sheller 2014; Adey et al. 2013;

Freudendal-Pedersen, Hannam, and Kesselring 2016). It encompasses the large-scale and the local processes of daily movements of people, goods, capital, and information. Over the last decade, the mobilities paradigm has generated enthusiasm across different fields and informed studies in a wide range of topics (Adey et al. 2013). The mobilities focus was initiated by John Urry in the book 'Sociology Beyond Societies' from 2001 where he elaborated on:

> "(…) some of the material transformations that are remaking the 'social', especially those diverse mobilities that, through multiple senses, imaginative travel, movements of images and information, virtuality and physical movement, are materially reconstructing the 'social as society' into the 'social as mobility'"(Urry 2000, 2).

Diverse modes of transport, and their influence on people's lives, can't be detached from ICT technologies and the meaning and significance this has to people's lives, and to society, as a whole. Mobilities are a highly ambivalent phenomenon when, throughout history, they have brought about positive economic and social corollary, such as wealth, freedom, flexibility and exchange. However, this simultaneously brings about increased inequality, environmental issues, acceleration and volatility (Freudendal-Pedersen 2009; Cresswell and Merriman 2011; Pooley, Turnbull, and Adams 2006; Birtchnell and Caletrío 2013). Historically mobility have contained the idea and promise of frictionless speed (Urry 2007; O. B. Jensen and Freudendal-Pedersen 2012), as that which would lead to better and happier lives. Instead the unintended consequences of the realization of the vision of 'seamless mobility' and a 'zero-friction society' manifested as congestion, noise, and environmental problems. These unintended consequences of mobilities play a role within everyday mobilities. In a complex and time pressured everyday life so much knowledge needs to be integrated when making decisions (Beck 1992; Giddens 1991; Freudendal-Pedersen 2009). Making everyday life choices is characterized by an eternal balance between what is considered 'right' or 'wrong' (Sayer 2005; Sayer 2011). Individuals need to decide how to navigate everyday life in the best possible way, creating a better life for themselves and their families. Thus the mobilities perspective also includes the social aspects of movement (or non movement).

The mobility management approach can be used as a way to identify potential gaps in

modern transport planning where mobilities, and thus the social aspects of transport, could be implemented (Sheller and Urry 2006; Urry 2007; Urry 2000; Cresswell 2006). The problem with viewing transport as a technical, physical matter, is that it overlooks the immense significance transport has for the city and its inhabitants in their daily life. The interconnection between mobilities and the city has a long tradition in Denmark within city planning and architecture (Gehl 1966; Gehl 2010). This approach is crucial when aiming at changing transport behaviour in everyday life. Habits, routines, ambivalences and irrational arguments have a great impact on the individuals' daily transport choices (Freudendal-Pedersen 2009; Hartmann-Petersen 2009; Freudendal-Pedersen 2015a) and that challenges the traditional transport planning systems. The mobility management approach potentially includes developing new understandings of mobility that may lead to more sustainable mobility patterns in everyday life, not only from an individual point of view but also by creating co-dependent initiatives that encourage companies, organisations, municipalities and others to integrate mobility matters in their social, environmental and economic strategies and plans.

Breaking away from path dependencies is a challenging task. One tool to open up new thinking can be working with utopias. Utopian thoughts related to the organization of cities and their mobilities can work as a window into a broader perspective, where imaginations of the future city can evolve.

> 'Utopian thinking, the capacity to imagine a future that is radically different from what we know to be the prevailing order of things, is a way of breaking through the barriers of convention into a sphere of the imagination where many things beyond our everyday experience becomes possible' (Friedman 2002, 103).

In this way utopian thinking inspires new ways of thinking. Of equal importance is the way utopian reflection also carries the critical potential to break through the 'barriers of convention' and makes us realize what we wish to change (Pinder 2005; Friedman 2002). Friedman's argues that utopian thinking has two moments: critique and constructive vision (Friedman 2002, 104). The critical action research, forming the methodological outset for this work, uses critique and utopias as constructive visions as methodological grips (Jungk and Müllert 1987). The importance of a 'critical scenario thinking' is highly relevant in relation to current transport challenges that seems to be 'locked in' to path dependent ways of thinking, designing and planning (Dennis and Urry 2009).

Mobility studies illuminate how our way of organising and planning housing dissociated from work, leisure and other everyday activities, adds up to a serious mobility challenge (Featherstone 2004; O. B. Jensen, Sheller, and Wind 2014; Freudendal-Pedersen, Hannam, and Kesselring 2016). Throughout the paper utopias and visions are used together. The intention is to use the concept of utopia in methodological and theoretically abstract contexts and visions as more oriented towards the applied perspectives.

Formula M as empirical case

The Formula M project was a large-scale Mobility Management project running from 2011-14, involving municipalities, transport service organisations, businesses, and traffic consultants. As part of the project a secretariat was established coordinating and gathering experiences and developing projects across, and within, the different municipalities. In a Danish context, the Formula M project was special due to its scale and duration. There are several examples of projects in Denmark that could be labeled as Mobility Management. In the late 1990s in particular, many initiatives primarily focusing on getting people to use the cycle or bus instead of the car began. Also, in 2002, the Copenhagen bus service started a commuter office that, in association with companies, worked with employee-oriented measures around public transport. These and numerous other similar projects have mostly focused on specific forms of mobility, specific locations or specific organizational levels (Atterbrand et al. 2005; Bunde 1997). Many of these projects have been successful and instructive but also temporary and/or institutionally delimited. Although there exist a large number of mobility-focused administrative units in Denmark, the orientations across mobility forms, disciplines and sectors are characterized by – and in many cases hindered by – divisions and separations (Kjærulf 2015; Sørensen 2005).

In Denmark, the Ministry of Transportation is responsible for coordinating the overall traffic planning and directs the overall policies in the field. The Ministry outsources different responsibilities to different public-private authorities, traffic service organizations and companies operating at different levels (local, municipal and regional). In 2010 the government passed an agreement called *Better mobility* with principles based on the continuing transportation policy *Green Transportation – A strategy for building*

a fossil-free society (2009). These two political agreements aim at developing and revolutionising the transport system, strengthening and improving bicycle flow, increasing traffic safety, developing bus transportation, reducing noise pollution and refining mobility. Attempts to improve mobility focuses mainly on public transport's technical efficacy and capacity and easing congestion, for example by expanding highways and cycle paths. (Transportministeriet 2010a; Transportministeriet 2010b). Despite the focus on green transportation, Denmark still exhibits growth in car transportation. In the last quarter of 2015, car traffic increased by 2.9 per cent, and cycle traffic declined by 3.1 percent compared to the last quarter of 2014. Apart from a negligible decline in 2010, car transportation is steadily growing (Road Directory 2016). Denmark is often portrayed as a cycling nation and an impressive 60 per cent of Copenhageners use the cycle to commute. However, despite this, more and more Copenhageners are buying cars (Copenhagen Municipality 2014). In 2014, 58 per cent of all trips in Denmark were made by car (DTU Transport 2014). Even if the Ministry of Transportation calls their plan *Better mobility* it focuses on transport as a technical matter with very little emphasis on the societal issues which are also an integral part of mobility choices (Banister 2008). Denmark, despite its success in promoting cycling in Copenhagen, still, to a large extent, views the mobilities of people and goods as a technical issue (Freudendal-Pedersen 2015a; Freudendal-Pedersen 2015b; Snizek, Sick Nielsen, and Skov-Petersen 2013; Ruby 2013).

The aim of the Formula M project was to create a nationally based integration between mobility management, urban and transport planning, and organizational management. In part this was sought through a broader integration of disciplines, crossing the usual sectorial divisions, and rethink mobilities planning cooperatively. Building on these ideas, the project Formula M was designed in collaboration between Roskilde University, the Gate21 Consultancy Company, and municipal planners from Ballerup (a Copenhagen suburb). In 2010, the Ministry of Transport, the Region of Copenhagen and Ballerup Municipality, funded the project. In order to implement mobility management in Danish municipalities and companies, one of the success criteria was to involve many different partners in order to try out different mobility management strategies. The entire project ended up with 26 partners from diverse places such as municipalities,

hospitals, and the regions, as well as transport operators. All together this meant an involvement in 23 sub-projects engaged at around 80 specific places of employment (Gate-21 2014). The work within the Formula M framework had different entry points. A number of sub-projects in the municipalities were simply administering the existing car fleet in the municipality and employee's own work-related transport. Other projects focused on establishing networks between private businesses to encourage and support employees in changing mobilities praxis. In this way, the Formula M project reached a large number of people directly or indirectly involved in the project. This article focuses on the research done together with the responsible planners from the municipalities involved in the project.

The Formula M project was based on an understanding of sustainability as a precondition, with the premise that sustainable mobilities demand adjustments, but that doesn't necessarily mean we have to totally give up the mobile practices that we know and understand today. But at least Western societies have reached a point where we realise we need to think more carefully about modes and trips (Dennis and Urry 2009; Urry 2013; Steffen, Crutzen, and McNeill 2007; Graham-Rowe et al. 2011). In the contemporary field of sustainability science, the defined challenge is to implement "its knowledge to meet the great environment and development challenges of this century" (Kates 2011, 19450). These 'challenges' should be seen as both social and environmental problems created by sets of interweaving practices, which, in their repetitiveness and volume, create both social and environmental problems (Sheller 2011; Egemose 2011). The social problems cover not only the social consequences of climate change, but perhaps, to a larger degree, a wide range of social practices tied to the generation of environmental problems.

With the Formula M project, the goal was not to limit this type of knowledge production to academic disciplinary fields, but also to involve planners producing solution-oriented knowledge based on personal knowledge. This frames a participatory worldview (Reason and Bradbury 2001) by Husted and Tofteng (2006) defined as The Common Third. The Common Third ensues when finding common ground as a result of different worldviews, intermingled into a new third. With the Formula M project, this also

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involved inviting the participants into processes of validating, or questioning, scientific knowledge according to their own practices. This created knowledge about how personal normativity and communal utopias might be the glue that holds these layers of knowledge production together. Also, these layers exist within an ontological gap in the modern set-up of institutions. In the following we will describe the methodological outset and discuss three important events in the Formula M project.

Methodological outset for working with utopias

The critical utopian action research has been the main inspiration for creating societal change based on an ontological critique of elitist planning processes in traditional transport planning (Freudendal-Pedersen, Hartmann-Petersen, and Nielsen 2010; Aagaard Nielsen and Svensson 2006; Sandercock 2011; Healey 2002).

The orientation towards examining and creating future possibilities played a role in designing the project application for Formula M. Introducing mobility management in Denmark belongs, as previously mentioned, to a long line of attempts to broaden the horizon for transport planning. This encompasses utopias about how future mobilities could look. For many years, utopias have been excluded from social science (Harvey 2000; Pinder 2005; Healey 2002; O. B. Jensen and Freudendal-Pedersen 2012) with action research as one of the only exceptions, especially critical utopian action research which has kept the focus on the productive forces of utopia (Bladt and Nielsen 2013; Tofteng and Husted 2011). In his book 'Visions of the City' Pinder (2005) gives an account of the positive and negative aspects of utopia in modern planning. But most importantly, Pinder stresses that utopias enable us to formulate a *critique of the existing*. This has been an important guiding principle in our work with the planners; we wanted them to take part in formulating their hopes for the future and, through this, attain knowledge on their critique of the existing.

The research within the formula M project had three goals: 1) to create common ground (utopias) for the planners work with the demonstration projects; 2) to create spaces for knowledge input; and 3) to discuss meaningful ways to evaluate the completed project. This led to the following three events: a future creating workshop; a learning seminar; and an evaluation workshop. This article primarily focuses on the future creation

workshop, but the following two events are also discussed briefly when they have had impact on sustaining the work from the Future Creating workshop. The events form examples of how a joint learning process between science and practice can evolve. The events have been carried out chronologically, in which they are here presented, with approximately one year in between each event. Emphasis has been on dialogue and utopias generated between participants and researchers. The empirical material used in this article consists of a protocol from a future workshop, our own reflective notes, and 15 interviews made with the participants in the process. Often when doing a future workshop it is a challenge to get the 'right' participant or stakeholders to find time to participate (Freudendal-Pedersen, Hartmann-Petersen, and Nielsen 2010). In the Formula M project this didn't pose a problem as the participants were all part of the project and had working hours assigned. In this way we had an ideal situation, with a long time frame and a stable core group of participants. The participants were 15 planners (six men and nine women between 27 and 48) from the 10 municipalities participating in the Formula M project. All the planners were responsible for initiating and implementing demonstration projects in their municipalities. For most of the planners, 20-30 per cent of their working load was allocated to the Formula M project.

The Future Creating Workshop

One of the challenges of the Formula M project was the amount of people working on the same project but from different institutional settings. Therefore a two-day Future Creating workshop was held in the initial phase of the Formula M project (Jungk and Müllert 1987; Aagaard Nielsen and Svensson 2006). The aim of the workshop was two fold: first, to create a common utopia (direction) for the project; and second, to create a community with whom experiences could be shared and lessons learned. The title for the workshop was: 'Formula M's contribution to developments of sustainable mobility in Denmark in 2025'. The Future Workshop is run according to a specific set of rules for communication and uses a variety of creative, sensual, playful and imaginative tools for generating ideas. The workshop is divided into three phases: a phase of critique, a phase of utopias, and a phase of realization (Drewes Nielsen 2006). The first two phases of the workshop were on the first day, and the third phase on the second. This provided more

time for the participants to work with their realizations; developing future utopias within everyday life arenas is influenced by an interesting duality. Even though participants are invited because of their professional background, everybody brings individualized experiences from – in this case – everyday life mobilities, into the setting. Being part of a mobile society, everyone is dependent on daily mobilites. Thus personal values, transport routines, constraints and emotions influenced the future visions formulated at the workshop.

Methodologically, the utopian work starts with a critique phase – one that provides a space for the frustrations and negativity that is an inevitable part of handling professional and private lives (B. S. Nielsen and Nielsen 2006). The critique phase is guided by specific rules, developed for future workshops in order to provide the best opportunity for creating a working context as equal as possible. The rules are: we are consequently negative; only short statements are allowed; no discussion; everything is relevant. All statements from the participants are written on sheets of paper hung on the walls to be visible throughout the phase. This resulted in 73 short statements of critique. The participants were each given three votes and asked to mark the critiques they found the most important. Below are the six critiques the participants voted as the most important:

Mobility management is a hippie approach
Public transport is to poor, expensive, bad, dirty, inflexible with bad service
It interferes with personal freedom
There is not enough political support
There is not a full-hearted support to Mobility Management
We don't have a clear storyline

These critiques illuminate the interplay between the personal and professional. It creates a transparency both in the participants' everyday experiences but also in relation to the working environments they have to struggle with when implementing these projects. In relation to working with the Formula M project, the phase of critique showed the difficulties the planners experienced by working in the project. They realised they were

working outside the traditional transport planning agenda, where alternative approaches quickly become labelled as 'hippie projects', and this brought about the frustration that there was no clear storyline. Despite the frustrations, and the amount of criticism, the participants were equally hopeful when it came to generating utopias in the subsequent phase. The utopian phase proceeds in the same way as the critique phase, but with a different set of rules. The rules in the utopian phase are: reality is out of function; we are situated in a perfect world, everything is possible; only short statements are allowed; no discussions; everything is relevant. In this phase 79 short statements were written on the walls and once again the participants got three votes each to mark the utopias they found most important in relation to the project. The following five statements were voted most pertintent:

In 2025, politicians dare to be at the forefront of Mobility Management initiatives
We have new incentive structures promoting sustainable mobility
Mobility Management is known, understood and accepted by all
It is cool to use public transport
Politicians and the population acknowledge the benefits

The utopias showed a clear orientation towards a utopia or a storyline for the Formula M project. This is important when the aim is to create strong visions and powerful aspirations and policies for sustainable cities. In planning theory this is also known as 'collaborative storytelling' and plays a key role. It also underlines how stories have a fundamental 'persuasive character' when it comes to making decisions on the future of cities (Flyvbjerg 1998; Throgmorton 2003; Sandercock 2003).

On the second day of the workshop, the participants were asked to choose one of the utopias to work with throughout the realization phase. We encouraged the participants to choose groups by sympathy and interest. The planners quickly identified three utopias/story-lines as vital results for the Formula M project. Throughout the day the planners worked with back-casting the utopia on a timeline and, through this, create a storyline for the guiding utopias for the Formula M project. Interestingly enough, these three stories dispersed on different scales.

1. *The traveller of 2025 is a Mobilist.* Being a Mobilist encompasses an overview of the many transportation options in mobile life and choices between modes of transportation in correlation with environmental issues. The Mobilist selects travel modes based on other aspects of the journey, such as opportunities to work or engage in recreation or a social life, etc. Mobility management provides the Mobilist with tools to create an overview and easier access to the many forms of mobility available, so that better choices, from both an individual and a common viewpoint, can be made.

2. *By 2025 we have developed incentive structures for sustainable mobility.* The physical planning and economic policy will support a number of incentives to promote environmentally friendly, efficient, and flexible modes of transport. This involves the establishment of shared platforms to organize transport in co-operation between municipalities, businesses and public institutions. Mobility Management has played an important role in organizing and carrying out these initiatives.

3. *By 2025 we have a Mobility Ministry.* The task of the mobility ministry is to coordinate between ministries so that mobilities is integrated into political strategies. Also the ministry supports local and regional mobility offices, working to promote sustainable transport solutions and to contribute to ensuring active Mobility Management policies in the private sector. The Ministry's role is to constantly expand the social infrastructure of mobility planning, while also ensuring that as many people as possible use the multifarious means of transport that cause minimum environmental impact.

In many way the first utopia mirrors a large percentage of the multi-modal user living and working in Copenhagen. The remaining municipalities represented in the workshop had quite a different mode share, entailing challenges with increasing car mileage in the municipality. The second utopia mirrors an on-going discussion in Denmark on the way tax deductions make car driving favourable. The strong belief that car transport equals

growth and development is very visible in the present incentive structures. The third utopia mirrors a long line of big centralising projects initiated by the Danish government (ex. building big hospitals and closing down local hospitals). In these big projects, the transport costs (both social, environmental and economic) is not part of the calculation and argumentation for the priorities made. The utopias produced in the workshop provide a comprehensive picture of the dynamics of a mobile society often lacking in utopias related to mobilities in cities (Timms, Tight, and Watling 2014). These three utopias formed the basis and common ground for the initial implementation in the Formula M project. After the workshop, the planners further developed and elaborated the utopias into action plans in two subsequent half-day meetings. The workshop and the following meetings created a continuous focus on the 'why' and 'for what' in the Formula M project. The participants also used them as storylines to support their communication outside the Formula M project, and as a way to understand opposition. Thus in several ways the utopias influenced the development of the project; they structured the issues of sustainable mobility planning on three scales: the individual (the Mobilist); the local (incentives for sustainable mobility); and the national (the Mobility Ministry).

In the Danish transport policy debate, the utopia of the Mobilist quickly deviated from the project. The Danish Protection Agency mentions the concept in their inspirational catalogue for initiatives promoting green business development (Danish Protection Agency 2014) and The Danish Cycling Federation have included the concept of the Mobilist in their strategies of future cycling policies. This indicates a break from the idea of a future, sustainable society encompassing big limitations in mobility, or even immobility, and provides new openings and directions to develop visions for future mobile everyday lives. The Mobilist also stirs up assumptions that transport is simply rationalist praxis that must be minimized, because time spent on mobility is unproductive and financially burdensome. Recent research on 'the mobile space' provided by daily transport shows how the mobile in-between create and produce a necessary space in everyday life, and it is used emotionally, recreationally, or even therapeutically (Freudendal-Pedersen 2009; H. L. Jensen 2012; Lyons et al. 2013; Watts and Urry 2008; Ross 1996). The other two utopias were important parts of the

development of the project but never had any real influence or dispersion into the public arena. From a research perspective, this is in line with current transport policies in Denmark as well as many mobility management initiatives where the focus is exclusively on individual mobility without seeking to promote collective and societal solutions. With a positive viewpoint, one can argue that the significance of the other scales for individual praxis became part of the planners' way of thinking. With a more pessimistic viewpoint, though, one could argue that even if new storylines evolved, business is unchanged.

Nevertheless the future-creating workshop framed a learning environment where professional and private experiences and values of the participants intermingled in a creative process across structural barriers. It also gave an important sense of direction, as mentioned here by one of the participants:

> "The most exciting thing about working with the utopias was also the hardest because before that we had no idea what we were doing. It was like throwing a lot of balls up in the air and then just thinking now I am catching the red one and now the green or just trying to catch one or the other. Then through the future workshop we ended up doing something that drew a line and we said now this is what we are doing. It was not just about tying knots on threads, we had to spin the thread first."

The workshop became a common point of reference throughout the entire Formula M project. It also created the very important feeling that the planners were not alone in this:

> "In the beginning I had this feeling of free-falling, it was impossible to make head or tail of it. I felt very alone in the beginning, but the future workshop created a kind of team spirit."

Training seminar with planners

After the workshop, the participants expressed a need for more knowledge in the fields of mobilities praxis . The Future Creating Workshop gave the participants a common storyline, but in order to carry it through the planning systems, they expressed a need for more knowledge. Sandercock shows the way people describe how urban life constitutes (urban) realities, and thus affects choices and actions:

> "…stories are central to planning practice: to the knowledge it draws on from the social sciences and humanities; to the knowledge it produces about the city; and to ways of acting in the city. Planning is performed through story, in a myriad of ways" (Sandercock 2003, 12).

Thus planners consciously and unconsciously use storytelling in the planning process, which is why the role and power of storytelling should be recognized to change perceptions and perspectives (Fischer and Forester 1993; Fischer and Gottweis 2012; Sandercock 2003). Also, within mobilities studies, research shows how path-dependencies can be seriously challenged or even changed (Kesselring 2001).

The planners are used to working within very limited time scales on a daily basis; they have politicians barking in one ear and the public in the other. In developing new mobilities systems and praxis, a long timehorizon is needed in order to move the focus from 'how things are going to be complicated for me tomorrow' to 'what kind of city I want in the future'. Working with utopias in the Future Creating workshop meant that the planner came back to their municipality with a mobilities perspective that had a long time horizon. This needed to be fitted into a setting with a much shorter time horizon. The planners directly asked for a training seminar and we organised a day with three one-hour lectures, each followed by one-hour slots for discussion. We decided on the themes we believed would enable the planners to argue for their ideas. The lectures had the following titles and content:

- **Mobility Management** – an overview of the different directions and approaches within the field
- **Transport policy and sustainable traffic planning** - taken-for-granted knowledge and path dependencies within transport planning and the way specific discourses of growth, the good life, the welfare society is determining the way transport planning is happening in Denmark.
- **Mobilities, Praxis and Utopias** – what does mobilities research mean, theoretical concepts of praxis in everyday life and theoretical concepts of utopias and how they can be used.

The planners asked a lot of questions during the lectures and the following hour of discussion after each lecture was, to a greater degree, used to discuss these issues in relation to the Formula M project and their other work in the municipalities. The evaluation after the training seminar showed a clear wish for even more abstract discussions and more complex theoretical issues. After the training seminar, one of the planners commented:

> "It is so rare that I get the time to sit down and learn something new. I actually think it should be something my boss obliged me to do, just to mess up our 'same-way-of-planning-as-we-always-do' and shake us up a little bit."

The training seminar highlighted the need and significance for interdisciplinary praxes in planning. We provided scientific knowledge; they provided input from praxis. The experience was that with a common goal to change mobility praxis, both planners and researchers have to consider the planning process as reciprocal. As researchers, we cannot devise sustainable solutions detached from the knowledge of praxis (Gibbons et al. 1994; Nowotny, Scott, and Gibbons 2001) – and planners need inspiration from research if they want to break with path dependencies in traditional transport planning. Providing spaces and places for re-thinking and re-adjusting is a central part of empowering actors and institutions for the transition of urban mobilities towards sustainability. The following was expressed by one of the participants:

> "I learned a lot from discussing what utopias are, like utopias might feel unrealistic but that's also what makes them motivating. For instance we have this goal in my municipality on being carbon dioxide neutral in 2030, that is an unrealistic utopia. But here I realized that it is also motivating because it gives us a clear direction, that's motivating and it is all about sticking to it."

The Evaluation Workshop

The final part of the work with the planner described in this paper is the evaluation seminar. In the final evaluation report to the Ministry of Transport, specific evaluation goals like reduced CO2 emissions were predetermined. Based on the importance of storytelling in the project, the planners felt that they also needed more qualitative evaluation tools. On a one-day Evaluation Workshop, other evaluation criteria and methods were developed. The main object was to avoid only having an expert-driven

target setting, where experts set up criteria for success, derived from demands for documentation rooted in politically driven indicators for legitimacy. The planners recognise the importance and effect of numbers from their daily work, but they also wanted to develop alternative evaluation methods that could disseminate the stories. The workshop involved three stages:

The first stage was setting up a methodological dialogue. Based on presentation from researchers, the planners discussed how to produce knowledge and assess results. The discussion focused on the difference between quantitative and qualitative evaluations. Specific quantitative goals were written into the Formula M project description – those that needed to be documented. The participants discussed the importance of these quantitative indicators to develop a political measuring point when managing projects like the Formula M project. But also – importantly – they agreed that throughout the project important conclusions derived from issues not easy to quantify. To uncover learning processes and narratives around e.g. experiences, dilemmas and routines in everyday life, qualitative indicators were more useful. The guiding role of utopias in the project made it very important for the planners to also evaluate through stories. Through the discussion of indicators, the participant agreed that quantitative measurements – counting – are preferable in some matters, mainly in relation to strategic use within political systems. Qualitative measurements – narrating – are fruitful in others, mainly in relation to set new goals and to communicate new strategies to citizens.

The second stage of the workshop summarized the participants' expectations and wishes for evaluation. Divided into groups, the participants were asked to come up with as many successful criteria as they could imagine for their current work with mobility management, to open up the scope of the evaluation. Subsequently they were asked to clarify and narrow down the arguments and priorities of specific aims and goals they wanted in the evaluation.

Finally, in *the third stage* of the workshop, the groups presented their outcomes and a common discussion about specific success criteria and potential knowledge production took place. Wrapping up the workshop highlighted the complexities of evaluating

experimental planning projects.

The evaluation workshop showed that the co-learning of the Formula M project created challenges in relations to societal demands for legitimacy in opposition to the learning they found important to disseminate. The tension unfolded between two strategic agendas: the desire to create results emphasizing their experiences of working with this kind of project, in opposition to the desires to produce quantifiable indicators used to drive a political process. The workshop resulted in a final evaluation report where a large emphasis was put on the importance of creating free spaces and a common learning in new planning projects. This was documented by means of the planners' story telling. The evaluation workshop also had important teachings when it became evident that the dialogue between science and society has the potential to be further developed, as expressed here by a participant:

> "I am thinking that what you did in this project was engaging us in the thinking about utopias and all that stuff. It became much more reflexive and giving and I was thinking – woah, we could have used much more of this in our work."

Conclusions

The relational planning emphasizes that planning takes place in processes of relationships between many actors (Healey 2007). In this article we have discusses how network relationships in a planning process can be established in praxis. Within the argumentative planning paradigm (Fischer and Forester 1993; Healey 1997) strong and convincing visions of where cities and regions shall be heading are considered essential. Through the Action Research methodology the Formula M project have used the work with utopias to create storylines that can potentially become powerful planning instruments, leading out of the inertia in urban mobility politics and beyond (O. B. Jensen and Richardson 2003).

When making workshops where utopias are produced, one often encounters the problem that there is no follow up to keep the utopias alive (Timms, Tight, and Watling 2014). This was one of the very important differences in the Formula M project. We were

involved from the outset of the project and, together with the planners, we worked actively to help them structure and develop their own agendas, and ultimately feed new impulses back into the project that provided new nuances for Formula M. By placing the future workshop at the beginning of the project, it was possible, through the other events, to relive the utopian thoughts and storylines, and through this support the planners in their daily work.

The strategic, methodological choices, inspired by action research (Drewes Nielsen 2006; Aagaard Nielsen and Svensson 2006), helped to create these new utopias, implementing a mobilities view on cities and transportation. By staging the future workshop in the early stages of the project, the participants developed the Formula M's utopias and realisations collaboratively, and were able to use them when returning to their everyday planning jobs. The utopias helped challenge the path-dependent generation of solutions in municipalities when it comes to transport issues. As Pinder (2005) points out, the utopias helped pin down exactly what participants wanted to change. This strengthened the planners' ability to present and discuss their utopias and proposals for action.

The three events helped to remove the participants from their everyday spaces of project management, political conflicts and power struggles, and established free spaces in which to think and discuss – which, in the day-to-day life of public planning systems, there is not much room or scope for. The participants often mentioned a deficiency in knowledge across municipalities; in this way the project also came to work as a knowledge network. From working together the participants gained a specific and nuanced language to describe and argue for project ideas and intentions. This also gave them a stronger voice when participating in debates on sustainable mobility and mobility management in Denmark, both at conferences and in political debates as expressed here by a participant:

> "We now have artillery to start communicating, I hope we will get even better. We now have something we can communicate so that the politicians start opening their eyes. We have been aware that how important it was to constantly tell the good stories through conferences, networks and articles."

The interaction and action research-inspired methods in this project have significantly differed from a more traditional role, often played by universities in relational planning projects. The invaluable insight the planners provided us into the transport rationalities of municipal planning, gave us the opportunity to feed back storylines and alternative stories they could use in their daily work. Out of these dialogues new orientations emerged towards planning and mobility, based within communities of action, like those expressed by this participant:

> "After a couple of decades with individualised behaviour the discourse has become more oriented towards communities and you can talk about transport, environment and health as common issues with a common responsibility."

This represents not only strategy and action as resources within an experimental development project, but also shows that spaces of learning and common understanding are vital for new ideas to emerge, and that learning-oriented communities within planning can be platforms for future sustainable mobility.

The length of the Formula M project was significant in relation to creating confidence, knowledge and strong storylines with the planners. Today, many of them have moved onto new planning jobs and have carried the view on sustainable mobility as a societal issue with them (Kjærulf 2015). Nevertheless, keeping the utopias alive constitutes a serious challenge when aiming to break with technocratic ways of thinking and path dependencies. The participants in the project often mentioned a deficiency in knowledge across municipalities. This lack of actors could be seen as one of the critical points when aiming at informing and guiding new experimental practices (Bergman and Jahn 2008). This is consistent with Sennett's descriptions of late modern society, where there is no time to provide access to others' competences (Sennett 1998; Drewes Nielsen et al. 2010). The relational planning emphasizes that planning take place in processes of relationships between many actors (Healey 2010; Healey 1997). In the process of planning, sequences of network relationships are established. Theories, however, often

lack descriptions of how these processes are handled and which approaches and methods are used to facilitate the relationships and dialogues between the numerous actors (Sandercock 1998; Sandercock 2011). The formula M project provides a good example on how to actively work with and within these processes. It also shows the potential in both the future workshop as well as the strength of storytelling for both internal and external processes of planning. Through working with utopias in the future creating workshop, the planners got the courage to break through the 'barriers of convention' (Friedman 2002) and started questioning the taken-for-granted ideas of transport planning in their municipalities – and they had the network in the Formula M project to support them. Today the utopia of the Mobililist is the strongest one. The word is now widespread within the transport planning and policy environment in Denmark. One might argue that it fits best into the individualised responsibility for changing praxis that does not demand larger societal reorganisations. Nevertheless it provides a good example of how utopias can come to life and live on. And from the positive standpoint, it has legitimatised the discussion that all trips do not have to be conducted by car.

References

Adey, Peter, David Bissell, Kevin Hannam, Peter Merriman, and Mimi Sheller. 2013. *The Routledge Handbook of Mobilities*. Edited by Peter Adey, David Bissel, Kevin Hannam, Peter Merriman, and Mimi Sheller. London: Routledge.

Atterbrand, Ann-Sofie, Brita Jorde, Olav Kasin, Thomas Krag, Björn Silfverberg, Johanna Skur, and Maija Stenvall. 2005. *Mobility Management in the Nordic Countries*. Copenhagen: Nordic Council of Ministers.

Banister, David. 2008. "The Sustainable Mobility Paradigm." *Transport Policy* 15 (2):

73–80.

Beck, Ulrich. 1992. *Risk Society: Towards a New Modernity*. London: SAGE Publications Ltd.

Becker, Egon, and Thomas Jahn. 1999. *Sustainability and the Social Sciences: A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*. London: Zed Books.

Bergman, Matthias, and Thomas Jahn. 2008. "CITY : A Model for Integration in Sustainability Research." In *Handbook of Transdiciplinary Research*, edited by Gertrude Hirsch Hadorn, Holger Hoffmann-Riem, Susette Biber-Klemm, Walter Grossenbacher-Mansuy, Dominique Joye, Christian Pohl, Urs Wiesmann, and Elisabth Zemp, 1st ed., 89–102. Zurich: Springer.

Birtchnell, Thomas, and Javier Caletrío. 2013. *Elite Mobilities*. London: Routledge.

Bladt, M., and K. a. Nielsen. 2013. "Free Space in the Processes of Action Research." *Action Research* 11 (4): 369–385.

Bunde, Jørgen. 1997. "The Bike Busters from Arhus, Denmark 'We'll Park Our Cars for 200 Years." In *The Greening of Urban Transport: Planning for Walking and Cycling in Western Cities*, edited by Rodney Tolley, 2nd ed., 373–377. Chichester: Wiley .

Canzler, Weert, Vincent Kaufmann, and Sven Kesselring. 2008. "Tracing Mobilities: An Introduction." In *Tracing Mobilities*, edited by Weert Canzler, Vincent Kaufmann, and Sven Kesselring, 1–10. Aldershot and Burlington: Ashgate.

Conley, Jim, and Arlene Tigar McLaren. 2009. *Car Troubles (Transport and Society)*. Farnham: Ashgate.

Copenhagen Municipality. 2014. "København Cyklernes By (Copenhagen - City of Cyclists)." Copenhagen.

Cresswell, Tim. 2006. *On the Move: Mobility in the Modern Western World*. London: Routledge.

Cresswell, Tim, and Peter Merriman. 2011. *Geographies of Mobilities: Practices, Spaces, Subjects*. Farnham: Ashgate.

Dennis, Kingsley, and John Urry. 2009. *After the Car*. Cambridge: Polity.

Dreborg, Karl H. 1996. "Essence of Backcasting." *Futures* 28 (9): 813–828.

Drewes Nielsen, Lise. 2006. "The Methods and Implication of Action Research." In *Action Research and Interactive Research*, edited by Kurt Aagaard Nielsen and Lennert Svensson, 89–115. Maastricht: Shaker Publishing.

Drewes Nielsen, Lise, Kurt Aagaard Nielsen, Eva Munk Madsen, and Katrine Hartmann-Petersen. 2010. *Fleksibilitet, Flygtighed Og Frirum [Flexibility, Volatility and Free Spaces]*. Roskilde: Roskilde Universitetsforlag.

DTU Transport. 2014. "Transportvaneundersøgelsen - Faktaark Om Biltrafik I Danmark (The Transport Habit Investigation - Fact Shed on Car Traffic in Denmark." Lyngby.

Egemose, Jonas. 2011. "Towards Democratic Sustainable Development. Social Learning through Upstream Public Engagement." Roskilde University.

Enoch, Marcus. 2012. *Sustainable Transport, Mobility Management and Travel Plans*. London and New York: Routledge.

Featherstone, M. 2004. "Automobilities: An Introduction." *Theory, Culture & Society* 21 (4-5) (October 1): 1–24.

Fischer, Frank, and John Forester. 1993. *The Argumentative Turn in Policy Analysis and Planning*. Edited by Frank Fischer and John Forester. Durham: Duke University Press Books.

Fischer, Frank, and Herbert Gottweis. 2012. "The Argumentative Turn Revistited." In *The Argumentative Turn Revisited*, edited by Frank Fischer and Herbert Gottweis, 1–27. Durham: Duke University Press.

Flyvbjerg, Bent. 1998. *Rationality and Power: Democracy in Practice*. London and Chicago: University of Chicago Press; First Edition.

Flyvbjerg, Bent, Todd Landman, and Sandford Schram. 2012. *Real Social Science: Applied Phronesis*. Cambridge: Cambridge university press.

Freudendal-Pedersen, Malene. 2009. *Mobility in Daily Life: Between Freedom and Unfreedom*. Vol. 2012. Farnham: Ashgate Publishing, Ltd.

———. 2015a. "Cyclists as Part of the City's Organism - Structural Stories on Cycling in Copenhagen." *City & Society* 27 (1): 30–50.

———. 2015b. "Whose Commons Are Mobilities Spaces? - The Case of Copenhagen's Cyclists." *ACME* 14 (2): 598–621.

Freudendal-Pedersen, Malene, Kevin Hannam, and Sven Kesselring. 2016. "Applied Mobilities, Transitions and Opportunities." *Applied Mobilities* 1 (1): 1–9.

Freudendal-Pedersen, Malene, Katrine Hartmann-Petersen, and Lise Drewes Nielsen. 2010. "Mixing Methods in the Search for Mobile Complexity." In *Mobile Methodologies*, edited by Ben Fincham, Mark McGuinness, and Lesley Murray, 25–43. New York: Palgrave Macmillan.

Friedman, John. 2002. *The Prospects of Cities*. Minneapolis: University of Minnesota Press.

Gate-21. 2014. "FORMEL M DEMONSTRATION OG FORANKRING AF MOBILITY MANAGEMENT 2011-2014." Albertslund. http://www.formelm.dk/Billeder/filer/SlutrapportforFormelM_08.09.14.pdf.

Gehl, Jan. 1966. *Livet Mellem Husene. Udeaktiviteter Og Udemiljøer*. 6th ed. København: Arkitektens Forlag.

———. 2010. *Byer for Mennesker*. Nykøbing Sjælland: Bogværket.

Gibbons, Michael, Camille Limoges, Helga Nowotny, Simon Schwartzman, Peter Scott, and Martin Trow. 1994. *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*. London: Sage.

Giddens, Anthony. 1991. *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Stanford: Stanford University Press.

Graham-Rowe, Ella, Stephen Skippon, Benjamin Gardner, and Charles Abraham. 2011. "Can We Reduce Car Use And, If So, How? A Review of Available Evidence." *Transportation Research Part A: Policy and Practice* 45 (5): 401–418.

Hajer, Maarten. 1999. "Zero-Friction Society." https://www.rudi.net/books/11454.

Hannam, Kevin, Mimi Sheller, and John Urry. 2006. "Editorial : Mobilities, Immobilities and Moorings." *Mobilities* 1 (1): 1–22.

Hartmann-Petersen, Katrine. 2009. "I Medgang Og Modgang (in Sucess and Hardship)." Roskilde University.

Harvey, David. 2000. *Spaces of Hope*. Edinburgh: Edinburgh University Press.

Healey, Patsy. 1997. *Collaborative Planning*. Vancouver: UBC Press.

———. 2002. "On Creating the 'City' as a Collective Resource." *Urban Studies* 39 (10): 1777–1792.

———. 2007. *Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times*. London and New York: Routledge.

———. 2010. *Making Better Places: The Planning Project in the Twenty-First Century*. Planning, Environment, Cities. Houndmills Basingstoke Hampshire and New York: Palgrave Macmillan.

Husted, Mia, and Ditte Tofteng. 2006. "The Common Third : The Researcher, the Particpants and Their Common Creation." In *Action Research and Interactive Research: Beyond Practice and Theory*, edited by Kurt Aagaard Nielsen and Lennert Svensson, 1st ed., 259–276. Maastricht: Shaker Publishing.

Jensen, Hanne Louise. 2012. "Emotions on the Move: Mobile Emotions among Train Commuters in the South East of Denmark." *Emotion, Space and Society* 5 (3): 201–206.

Jensen, Ole B., and Malene Freudendal-Pedersen. 2012. "Utopias of Mobilities." In *Utopia: Social Theory and the Future*, edited by Michael Hviid Jacobsen and Keith Tester, 197–218. Farnham: Ashgate.

Jensen, Ole B., and Tim Richardson. 2003. *Making European Space: Mobility, Power and Territorial Identity*. London: Routledge.

Jensen, Ole B., Mimi Sheller, and Simon Wind. 2014. "Together and Apart: Affective Ambiences and Negotiation in Families' Everyday Life and Mobility." *Mobilities* 10 (3): 363–382.

Johannisson, Bengt, Ewa. Gunnarsson, and Torbjörn Stjerneberg. 2008. *Gemensamt Kunskapande - Den Interaktiva Forskningens Praktik*. Edited by Bengt Johannisson, Ewa. Gunnarsson, and Torbjörn Stjerneberg. Växjö: Växjö University Press.

Jungk, Robert, and Norbert Müllert. 1987. *Future Workshops: How to Create Desirable Futures*. London: Institute for Social Inventions.

Kates, R. W. 2011. "What Kind of a Science Is Sustainability Science?" *Proceedings of the National Academy of Sciences* 108 (49): 19449–19450.

Kesselring, Sven. 2001. *Mobile Politik: Ein Soziologischer Blick Auf Verkehrspolitik in München: Univ., Diss--München, 2000.* Berlin: edition sigma.

Kjærulf, Aslak Aamot. 2015. "Mobiliteter I Planlægningen." Roskilde University, Denmark.

Lang, Daniel J., Arnim Wiek, Matthias Bergmann, Michael Stauffacher, Pim Martens, Peter Moll, Mark Swilling, and Christopher J. Thomas. 2012. "Transdisciplinary Research in Sustainability Science: Practice, Principles, and Challenges." *Sustainability Science* 7 (1): 25–43.

Lyons, Glenn, Juliet Jain, Yusak Susilo, and Stephen Atkins. 2013. "Comparing Rail Passengers' Travel Time Use in Great Britain Between 2004 and 2010." *Mobilities* 8 (4) (November): 560–579.

MAX Research Project. 2008. "Definition of Mobility Management and Categorisation of Mobility Management Measures: Annex E to the Comprehensive Research Plan." EU. http://www.epomm.eu/old_website/index.phtml?Main_ID=820.

Möser, Guido, and Sebastian Bamberg. 2008. "The Effectiveness of Soft Trans- Port Policy Measures: A Critical Assessment and Meta-Ana- Lysis of Empirical Evidence." *Journal of Environmental Psy- Chology* 28 (1): 10–26.

Nielsen, Birger Steen, and Kurt Aagaard Nielsen. 2006. "Methodologies in Action Research." In *Action Research and Interactive Research. Beyond Practice and Theory*, edited by Kurt Aagaard Nielsen and Lennart Svensson, 63–87. Maastricht: Shaker publishing.

Nowotny, Helga, Peter Scott, and Michael Gibbons. 2001. *Re-Thinking Science: Knowledge and the Public in an Age of Uncertainty*. Cambridge: Polity Press.

Pinder, David. 2005. *Visions of the City: Utopianism, Power and Politics in Twentieth-Century Urbanism*. Edinburgh: Edinburgh University Press.

Pooley, Colin G., Jean Turnbull, and Mags Adams. 2006. *A Mobile Century?: Changes*

in Everyday Mobility in Britain in the Twentieth Century (Transport and Mobility). Aldershot: Ashgate Pub Co.

Portal, Information Exchange. 2012. "EPOMM - European Platform on Mobility Management."

Reason, Peter, and Hilary Bradbury. 2001. "Introduction: Inquiry and Participation in Search of a World Worthy of Human Aspiration." In *Handbook of Action Research - Participative Inquiry and Practice*, edited by Peter Reason and Hilary Bradbury, 1–14. London : Sage.

Road Directory. 2016. "Key Numbers for Traffic in Denmark." http://www.vejdirektoratet.dk/DA/viden_og_data/statistik/trafikken i tal/hvordan_udvikler_trafikken_sig/Sider/default.aspx.

Ross, Kristin. 1996. *Fast Cars, Clean Bodies: Decolonization and the Reordering of French Culture*. Massachusetts: The MIT Press; 4 edition.

Ruby, Lotte. 2013. "How Denmark Become a Cycle Nation." *Denmark.dk*. http://denmark.dk/en/green-living/bicycle-culture/how-denmark-become-a-cycling-nation/.

Sandercock, Leonie. 1998. *Towards Cosmopolis. Planning for Multicultural Cities*. Chichester u.a.: Wiley.

———. 2003. "Out of the Closet: The Importance of Stories and Storytelling in Planning Practice." *Planning Theory Practice* 4 (1): 11–28.

———. 2011. "Transformative Planning Practices - How and Why Cities Change." In *Multiculturalism, Political Concepts in Sociology*, edited by Gert Baumann and Steven Vertovec, 157–179. Milton Park, Abingdon: Routledge.

Sayer, Andrew. 2005. *The Moral Significance of Class. Significance*. Cambridge: Cambridge University Press.

———. 2011. *Why Things Matter to People: Social Science, Values and Ethical Life*. Cambridge: Cambridge University Press.

Sennett, Richard. 1998. *The Corrosion of Character: Personal Consequences of Work in the New Capitalism*. New York, London: W. W. Norton & Co.

Sheller, Mimi. 2004. "Automotive Emotions: Feeling the Car." *Theory, Culture & Society* 21 (4-5) (October 1): 221–242.

———. 2011. "Creating Sustainable Mobility and Mobility Justice." In *Mobile / Immobile: Quels Choix, Quels Droits Pour 2030?*, 113–124. Paris: Mobile Lives Forum.

———. 2014. "The New Mobilities Paradigm for a Live Sociology." *Current Sociology* 62 (6): 789–811.

Sheller, Mimi, and John Urry. 2006. "The New Mobilities Paradigm." *Environment and Planning A* 38 (2): 207–226.

Snizek, Bernhard, Thomas Alexander Sick Nielsen, and Hans Skov-Petersen. 2013. "Mapping Bicyclists' Experiences in Copenhagen." *Journal of Transport Geography* 30 (227-233).

Steffen, Will, J Crutzen, and John R McNeill. 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?" *Ambio* 36 (8): 614–621.

Svensson, Lennart, Per-Erik Ellström, and Göran Brulin. 2007. "Introduction - on Interactive Research." *International Journal of Action Research* 3 (3): 233–249.

Swyngedouw, E. 2010. "Apocalypse Forever?: Post-Political Populism and the Spectre of Climate Change." *Theory, Culture & Society* 27 (2-3) (May 24): 213–232.

Sørensen, Claus Hedegaard. 2005. "New Conditions for Decisionmaking and Coordination in Transport?: Corporatisation and Division in the Danish Railway Sector." In *Social Perspectives on Mobility*, edited by Thyra Uth Thomsen, Lise Drewes Nielsen, and Henrik Gudmonsson, 155–179. Aldershot: Ashgate.

Throgmorton, James a. 2003. "Planning as Persuasive Storytelling in a Global-Scale Web of Relationships." *Planning Theory* 2 (2): 125–151.

Timms, Paul, Miles Tight, and David Watling. 2014. "Imagineering Mobility: Constructing Utopias for Future Urban Transport." *Environment and Planning A* 46 (1): 78–93.

Tofteng, D., and M. Husted. 2011. "Theatre and Action Research: How Drama Can Empower Action Research Processes in the Field of Unemployment." *Action Research* 9 (1): 27–41.

Transportministeriet. 2010a. "Aftale Om Bedre Mobilitet." Denmark: Ministry of Transport.

———. 2010b. "Besluttede Projekter Med Aftale Om Bedre Mobilitet." Copenhagen. http://www.trm.dk/da/politiske-aftaler/2011/projekter-i-aftale-om-bedre-mobilitet.

Urry, John. 2000. *Sociology Beyond Societies: Mobilities for the Twenty-First Century (International Library of Sociology)*. London: Routledge.

———. 2004. "The 'System' of Automobility." *Theory, Culture & Society* 21 (4-5) (October 1): 25–39.

———. 2007. *Mobilities*. Cambridge: Polity Press.

———. 2013. *Societies Beyond Oil: Oil Dregs and Social Futures*. London: Zed Books Ltd.

Watts, Laura, and John Urry. 2008. "Moving Methods, Travelling Times." *Environment and Planning D: Society and Space* 26 (5): 860–874.

Aagaard Nielsen, Kurt, and Lennert G. Svensson. 2006. *Action Research and Interactive Research: Beyond Practice and Theory*. Maastricht: Shaker Publishing B.V.