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# 1 Introducing the research challenge

If a man is offered a fact which goes against his instincts, he will scrutinize it closely, and unless the evidence is overwhelming, he will refuse to believe it. If, on the other hand, he is offered something which affords a reason for acting in accordance with his instincts, he will accept it even on the slenderest evidence. The origin of myths is explained this way.  
(Russel, 1919: 147)

## 1.1 Framing the research problem and approach

Mobility research is undoubtedly one of the largest and fastest growing research fields of our time, reflecting the intrinsic value ascribed by human societies to practices of movement across time and space. It is transdisciplinary by nature, spanning the social, the natural, the formal, the applied, and the cognitive sciences. Human geography, itself an inherently transdisciplinary research field, has long been in the forefront of this research, addressing the movement of goods, money, information, ideas and, not least, people across time and space. Mobility issues have been addressed via a multitude of aspects, traversing economic, cultural, and social perspectives. Yet as the environmental impacts of our mobility practices become continuously greater and more evident, few perspectives have been as prominent of late as that of sustainability.

The historic as well as the contemporary trends in mobility are towards increased use of energy, materials, and space; i.e. an increase of entropic processes with high energy throughput (Boulding, 1966). The transport of people and goods has increased exponentially over the last 100 years (Banister et al., 2012) and while world population has grown by a factor of about four over the last century, motorised passenger kilometres by all modes has increased on average by a factor of about 100 (OECD, 2000). Passenger transport volumes are predicted to continue their increase, becoming up to 2.5 times as large in 2050 as in 2010 (OECD, 2012). Transport currently accounts for 25 % of global CO<sup>2</sup> emission (IEA, 2011), 71 % of oil use in the EU (EU, 2011) and 20-40 % of the world consumption of major materials such as cement, aggregates, steel, and aluminium (OECD, 2000). While growing more slowly due to increased energy efficiency, CO<sup>2</sup> emissions are nevertheless predicted to more than double over the coming 30 years (OECD, 2012). These and similar numbers are well known to us and there are few today who would, or credibly could, argue against the need for some variation of a sustainable mobility transition. Still, with all the knowledge and technology available, such a transition is yet to emerge. This thesis, therefore, focuses attention on the processes or elements which resist or hinder developments of sustainable mobility practices, i.e. forces which sustain and naturalise continued escalations of physical mobility.

To address these elements, the thesis adopts a system perspective which asserts that mobility practices are part of an intricate system, or rather of several mutually supporting systems, which creates network dependencies (Unruh, 2000). All mobility practices are reliant upon a multitude

of supporting technologies in order to create fully integrated and functional mobility systems (Fink, 1988). A single car, for example, requires not only a wide variety of building materials – steel, glass, rubber, petroleum – but also enabling infrastructure, supporting rules and regulations, political backing, cultural acceptance, and a vast network of supporting agents and practices which enable and benefit from the continued existence of the ‘steel and petroleum automobility’ (Urry, 2004).

The systemic aspect of mobility, which emphasises the interconnected nature of mobility practices and the proneness to systemic ‘lock-ins’, has been increasingly acknowledged of late (e.g. Dupuy, 1999; Unruh, 2000; 2002; Featherstone, 2004; Urry, 2004; 2008; Unruh and Carrillo-Hermosilla, 2006). Yet while lock-in, or, as it is better known within the social sciences, path-dependence, is a well-known concept by itself, its components remain unevenly explored and understood. The fundamental importance of the element of belief – the credence given to the legitimacy and virtue of a chosen path or system – is often acknowledged, yet comparatively little understood. The aim of this thesis is therefore to explore a concept which specifically concerns the legitimisation, contextualisation, and, most importantly, the naturalisation of choices and paths that lead to and sustain systemic lock-in, i.e. myth. Myth, as used within myth theory, is not synonymous to a misconception or a lie. Rather, a myth is a naturalised and emplotted story which serves to legitimise and guide practice (Cassirer, 1946a; Barthes, 1972; Schöpflin and Hosking, 1997). It is based on belief rather than objective facts, yet it needn’t be in conflict with facts. Rather than contrasting myth with truth, truth and its characteristics should be considered a non-issue (Hall, 2006). Instead, the power and impact of the myth relies on the extent to which its adherents believe in it and on the influence it has over the way in which they choose to live their lives (Hall, 2006). Thus, myth emphasises the relationship between the perceived and practice, stating that one is inherently linked to the other. A study of myth is therefore not only a study of semiotics, but also of the practices – and by extension the materialities or geographies – which find explanation and justification in the myth.

The particular myth in focus in this thesis is one that fundamentally supports and augments practices of high mobility and subsequent mobility system lock-in, and which I choose to name the myth of ‘prosperity through mobility’. Mobility, the myth states, is the foundation of societal as well as individual progress. It is the backbone or the arteries of modern society and the very basis upon which new geographies can be created and maintained. Although not entirely unproblematic, mobility is considered a positive force in society and, what’s more, a force that we cannot go without. Adherents of the myth act accordingly, by supporting and driving mobility enabling processes, including infrastructural developments and institutional support.

## 1.2 Aim & research question

The aim of this thesis is to explore the concept of myth within the field of human geography, from the perspective of a system approach, and applied to the issue of mobility lock-in. At the onset of the project, much emphasis was put on issues of sustainable mobility transitions, including such concepts as ‘best practice’ and ‘good examples’ and was to be illustrated by selected measures from an EU project aimed at creating sustainable urban mobility. Myth theory,

in this initial phase, was seen to have a supportive role rather than an exploratory. However, as work progressed the issue of myth as such took an increasingly prominent position, partly as a result of the realisation of its unexploited potential within geographic research as well as in studies of system lock-in, and partly as a result of my own increased interest in the ins and outs of myth theory research. In addition, the perspective of a systems approach has developed over time, based on the simple, but imperative, assertion that societal phenomena do not happen in a vacuum. Finally, introducing the concept of lock-in made it all fall into place and the objective for the thesis established itself as exploring the role of myth in the lock-in of a high mobility system. Based on these aims, the framework of the thesis is set within one initial claim and one overarching research question. The claim asserts that:

*Myth is an underexplored, yet potentially highly valuable concept for geographical studies as well as for studies concerning processes of systemic lock-in.*

In attaining support for this claim, the thesis directs attention to the characteristics of myth, its potential use for geographical research, and its correspondence to or compatibility with elements, concepts, and processes related to lock-in.

Based on this claim, the explorative research question is formulated thus:

*What is the role of myth in the lock-in of a high mobility system?*

This question comprises a subset of questions; including what the role of myth is in processes of lock-in in general as well as in the more specific issue of mobility lock-in. It also includes an empirical element in that it explores the role of the myth of prosperity through mobility in practice (case-study), thus reconnecting to the claim that the concept of myth is a useful concept for human geographical research.

### 1.3 Delimitations

As the concept of mobility includes a wide span of practices – physical, virtual, social – a few initial delimitations on the practice of mobility are needed. When discussing the practice of mobility, the thesis addresses the first of the four senses of mobility presented by Kaufmann (2003), which is mobility as something or someone that physically moves through space. The thesis does not address any kind of social or cultural mobility, nor any mobility made possible through means of information technology, i.e. virtual mobility. Furthermore, the thesis' aim is limited to include only corporeal mobility, i.e. the movement of people, not goods, and by the use of some means of transport, or what Urry would call 'physical prosthesis' (Urry, 2004). Two transport mediums are however exempt in the discussion, namely airplanes and motorcycles. The geographical scale set in this study is that of the regional level (which excludes air-travel) and the study only comprises means of transport which are included in the case-study of SMILE – an

EU-funded project aimed at creating sustainable urban mobility – and the regional travel surveys (which exclude motorised two-wheelers).

Geographically, the thesis is limited to the city of Malmö, located in the transnational Öresund Region. In exploring institutional lock-in, the prime source of data is derived from interviews with staff and evaluators from the SMILE project which was set in Malmö. For the infrastructural lock-in the geographical span widens to include the Öresund Region as many of the infrastructural developments of Malmö are aimed at creating regional, rather than urban, mobility.

#### 1.4 Thesis outline

This thesis is comprised of three papers and a kappa. One purpose of the kappa is to present those circumstances, choices, and conditions which lay the foundation for the three papers, but which the limitations of the paper format strictly prohibit. The other purpose of the kappa is to summarise and discuss the results presented in the papers in order to provide a more comprehensive answer to the overarching research question. The articles each deal separately with the themes and issues presented throughout the kappa, and correspond to one or several key issues presented in the initial claim and research question of this thesis. The articles are briefly summarised in the next section and appended in their entirety to the end of the kappa.

As the concept of myth is not commonly used within human geographic research, a large portion of this thesis is devoted to explore the concept as such. The effort put into the theoretical exploration of the use and usefulness of myth is reflected in the corresponding space given to the issue in both the kappa and the papers.

The structural outline of the kappa is divided into nine sections. The three sections (i.e. sections 2-4) that follow these introductory parts present the thesis' theoretical framework. This includes the introduction and discussion of the systems approach and the process of lock-in, an argument for the characterisation of the mobility issue as a 'wicked' problem, and a presentation of the concept of myth and its function of providing naturalisation for wicked problems and its role in processes of lock-in. It also includes a (theoretical) presentation of the myth of prosperity through mobility.

In the succeeding section (section 5) the methods are outlined. As this thesis is an exploration of theory as much as of empirics, the section opens with a short review of previous and potentially guiding research involving the concept of myth. For the empirical part of the thesis, a multi-method approach which crosses the quantitative/qualitative divide is applied. The data is collected chiefly through interviews and text searches (municipal strategic documents and SMILE project documents) and supplemented by statistical data and, to a lesser extent, media coverage. Geographical analysis is used for analysing infrastructural lock-in, i.e. analysing the development of regional mobility infrastructure which corresponds with and finds support and legitimisation in the myth of prosperity through mobility. Using several sources of data (and methods by which it is collected) opens up for finding deviating or contradictory results, e.g. discrepancies between the spoken word and practice, which may point to inert contradictions of belief and action. This

section also includes a presentation of the tool for data analysis, which is critical discourse analysis.

Next (section 6), the case-study of Malmö and the SMILE project is presented. This section does not offer any analysis, which is instead discussed in the papers as well as summarised in the results section of the kappa. Rather, the purpose of section 6 is to familiarise the reader with the case-study area and SMILE project as such so as to create a contextual framework for the papers as well as for the latter parts of the kappa.

The main results are then presented and briefly discussed (section 7) under headlines corresponding to the main findings of the study: the use and usefulness of the concept of myth for geographical research; and the role of myth in the process of lock in as analysed in the forms of infrastructural and institutional lock-in. It also includes a short presentation of one of the main strategic outcomes of ascribing to and applying the myth of prosperity through mobility, i.e. an exclusive focus on a mobility shift (to 'green' modes of transport) rather than mobility limitation; a strategy which enables the further escalation of systemic mobility lock-in.

The penultimate section (section 8) offers a number of suggestions for further research which both builds upon as well as moves beyond the themes and issues presented in the thesis.

Finally, the last section (section 9) summarises the entire thesis, inclusive of the contributions of the appended articles.

## 1.5 Summary of the papers

### Paper 1 – *A mythical place: A conversation on the earthly aspects of myth*

The first paper of the thesis discusses the use and usefulness of the concept of myth in and to human geographical research. It is structured as a conversation, or an exchange of ideas, between the fields of myth theory and human geography with the aim of trying to discern possible, yet unexplored, venues for concept/discipline collaborations.

It concludes that while the very concept of myth is not foreign to studies of human geographical issues, its use has been scattered, vague, and occasionally even confusing. Still, the long disciplinary tradition of exploring perception-place issues, going back to the 1920s and Wright's 'history of geographical ideas', makes for ideal preconditions for an expanded and deepened geographical application of myth. Most prominent and recurrent of these pitfalls are historicisation (ascribing myth to a past era of man or, similarly, only studying myth in hindsight), formalisation (removed from the realm of everyday practice and put into the domain of the reified, and presumption (relying on tacit, yet varied, conceptual understanding, most often as a misconception or a lie).

Myth, as used within the transdisciplinary field of myth study, is however neither archaic nor automatically erroneous. Instead, the paper defines myth as an emplotted and naturalised story which reflects ideology, alleviates anxiety, and guides everyday practice. As such, they have material, or geographical, consequences as perception of place form spatial realities. The myth is distinguished by several characteristics, including transcendence over time, inherent Manichaeism (the struggle between good and bad), and a juxtaposing fear of alternatives which ensures the

allegiance of its adherents. Truth is a non-issue as myths draw their power from belief, not facts, and cannot be disputed by logical arguments or syllogism. Instead, the myth relies on its own, internal logic; a taken-for-granted logic which is beyond questioning.

As definition narrows, conceptual use widens. Understood as a naturalised story which forms and legitimises geographical realities, myth may be applied to several contemporary issues within human geographical research. These include, but are far from limited to, the importance of language for spatial understanding and outcome; the significance of everyday and unreflected practices; and the intricate mystery of obduracy or inertia. Furthermore, by employing the concept of myth, geography would have as much to offer myth theory as vice versa, as many studies of myth are as guilty of presumptions of place as geographical studies are of assumptions of myth. Myth, while often geographically located – set in Japan, the region of Alsace, or the city of Teheran – rarely considers the specifics of the very concept of place. Few research traditions would benefit more from insight into place formation offered by myth as human geography, nor be better equipped to advance a spatial understanding of myth.

The paper's contribution lies in it highlighting the myriad of linkages which tie the concept of myth to those of place and space, arguing for more explicit academic exchange. It invites geographers to engage with the concept of myth through both theoretical and empirical research, following the notion of place as a topographic idea.

Paper 2 – *Contradictions of 'sustainable mobility': the illogic of growth and the logic of myth* (Essebo and Baeten, 2012)

Paper two has the characteristics of a discussion piece and was written for a special issue of *Tijdschrift Voor Economische en Sociale Geografie* addressing the design, experience, and justice of mobility.

The paper discusses how myth can be used to merge possibly opposing notions into a coherently emplotted and naturalised myth that perpetuates the status quo of a high mobility system. It suggests that the concept of 'sustainable mobility' is an amalgamation of two stories – the story of development as quantitative growth (including mobility growth) and the story of sustainability – which, in effect, promote opposing values. It is a fundamental contradiction made possible through the employment of myth, which naturalises the continuation of high mobility development. The myth of sustainable mobility draws power from fear of the alternative – economic collapse and environmental degradation – while at the same time finding a compromising solution which allows for both continued mobility growth and the preservation of environmental resources. The result, the paper argues, is a confusion of concepts as the contradiction between growth and biophysical limits fades, making any alternative redundant.

Paper 3 – *The role of myth in lock-in: the case of the Öresund Region and the City of Malmö*

The third and last paper explores the practical application of the concept of myth and its role in lock-in of a high mobility system. It centres on a case-study of the city of Malmö in the Öresund



Region – a transnational region spanning south-western Sweden and eastern Denmark. Following the industrial collapse of the 1990s, the city of Malmö faced a critical juncture which forced a comprehensive shift in development strategy. As a result, the city refocused attention towards regional cooperation and enlargement; a strategy entirely dependent upon substantial mobility investment and escalation.

The paper explores how myth has been used as a legitimising and naturalising tool for the ‘mobility strategy’. The myth in question – that of prosperity through mobility, presented in paper two – states that mobility is a positive and necessary force for economic growth and, thereby, social and environmental development. Its influence is traced in two types of lock-in: infrastructural and institutional. Importantly, the problem is here not defined as mobility practices as such, but as the unavoidably limiting aspect of continuous escalation, i.e. the lock-in of a system requiring infinite mobility increase.

Using critical discourse analysis on a wide span of local, regional, and supranational strategic development documents, infrastructural lock-in is studied by analysing the role of the myth in legitimising major mobility infrastructural developments; i.e. the material outcomes of myth. It showed that infrastructural investments and mobility expansion – the Öresund Bridge and the City Tunnel – were justified by their function as enablers or even creators of economic growth. Mobility infrastructure – likened to the arteries, the heart, and the backbone of regional development – is portrayed as a vital, endless, and successful path to societal progress. Juxtaposed is the vision of a stagnant, waning, and limited society – a dystopia – which draws on the myth characteristic of fear for alternatives.

Institutional lock-in is explored through the case of SMILE (Sustainable Mobility for peopLe in urban aEras) – an EU project launched by the city of Malmö with the aim of creating sustainable urban mobility. Here, the potential influence of the myth of prosperity through mobility is analysed in a process explicitly aimed at counteracting the unsustainable trend of mobility increase. A goal that could, or should, include avoiding lock-in of ever escalating mobility practices.

Through interviews with project workers (administrators and practitioners from the municipality of Malmö, the project evaluators, and representatives of the public transit company) it could be concluded that the myth of prosperity through mobility had a strong influence on everyday strategic mobility development. The strategies of rejection (dismissing alternatives to the chosen path/myth) and decoupling (officially endorsing alternatives, but rejecting them in practice) were used to maintain discursive coordination centred on the myth. The rejected alternative was that of limited or reduced mobility as this, in line with the myth, would halt or even reverse regional development defined as (economic) growth. A limited or ‘capped’ mobility was seen as a viable option only by the public transit representatives, yet this alternative was clearly rejected by municipal (and deciding) authorities. Decoupling was found in a discrepancy between official aims of working against business as usual trends of increased mobility and the dilution or outright rejection of any such measures in practice.

Rejecting strategies of mobility restriction, the remaining option was that of a mobility shift, i.e. a relocation from unsustainable (car) to sustainable (train, bus, bicycle, feet) modes of transport. This shift enabled continued allegiance to the myth as these ‘green modes’ are not considered subjects to the same, or any, limits. Lock-in itself is thereby not defined as a problem, but rather

as a mark of success as more elements (infrastructural and institutional) align with the current system of 'sustainable' mobility escalation.

## 2 A systems approach to myth

### 2.1 Systems approach

A school is a system. So is a city, and a factory, and a corporation, and a national economy. An animal is a system. A tree is a system, and a forest is a larger system that encompasses subsystems of trees and animals. The earth is a system. So is the solar system; so is a galaxy... Sand scattered on a road by happenstance is not, itself, a system.

(Meadows, 2009: 11f)

When addressing issues within the social sciences, it is sorely tempting to imitate the tidiness sometimes seen in the natural sciences, where phenomena can be delimited to singularities to be studied in isolation. Equally alluring is the instinct to ‘include it all’, thus getting trap in a never-ending butterfly effect. The former approach runs the risk of seeing the parts but missing the links, thus excluding central processes of interdependence, whereas the latter leaves the issue spread thin and flavourless and leaves you in the situation where you can’t say anything about anything without saying something about everything. The challenge, then, is to explore the depths of the particularities while recognising the strength and sensibility of a wider systems approach. In this thesis, the challenge is approached by acknowledging the importance of a systems perspective concerning processes of lock-in, thus recognising the intricate nature of interconnectedness, while exploring the particulars of one specific systems component which, up to date, has not received the attention it might deserve, i.e. myth. Myth, like a school, a factory, or a galaxy, is a system in itself. Yet it is also a vital part in larger systems, systems which require context, legitimisation, and, above all, naturalisation. The past and potential future use of the concept of myth within geographical research is explored in paper one while paper three discusses the role of myth in processes of lock-in by way of an empirical case study. In order to complement these specific uses and functions of myth, the kappa places the concept of myth in the larger context of a systems approach. It also discusses its role in lock-in at further length and, more importantly, considers the particular types of issues where the use of myth may be particularly needed or well suited, i.e. in issues which are facing the complexity of particularly ‘wicked problems’ (Rittel and Webber, 1973). Before delving further into the specifics of myth, however, section gives a short overview of the characteristics of the systems approach and its foundational importance for the understanding of lock-in.

The systems perspective, or the ‘Systems Age’ (Ackoff, 1973), can be traced as far back as the 1940’s when *expansionism* – a doctrine claiming all objects and events as well as all experiences of them to be parts of larger wholes – gained influence. Importantly, experiences are here seen as system components, emphasising that components need not be physical but can also be constituted by actors, information, cultural dogmas etc. (Ackoff, 1973; Stankiewicz and Carlsson, 1991; Law, 1992). It is the interplay between the material and the non-material that make up systems, as stated by Law:

If human beings form a social network, it is not because they interact with other human beings. It is because they interact with human beings *and* endless other materials too.  
(Law, 1992: 382)

In the very most basic sense of the term, then, a system contains both material and non-material components, connections between these components and a boundary which encloses the system, at least conceptually isolating it from other systems (Kushnir, 2012). These system components together create a whole that is bigger than the sum of its individual parts and may have properties that differ from those of the individual components (Unruh, 2000; Meadows, 2009). Summarised, a system is:

a set of elements or parts that is coherently organized and interconnected in a pattern or structure that produces a characteristic set of behaviours, often classified as its “function” or “purpose”  
(Meadows, 2009: 188)

A system may be comprised of several smaller systems, as they ‘nestle hierarchically like a Russian Easter egg into a pattern of systems and subsystems’ (Hughes, 1987: 54). Setting the system boundary therefore becomes essential as it defines the system in both positive terms (that which belongs to the system) and negative terms (that which does not belong to the system).

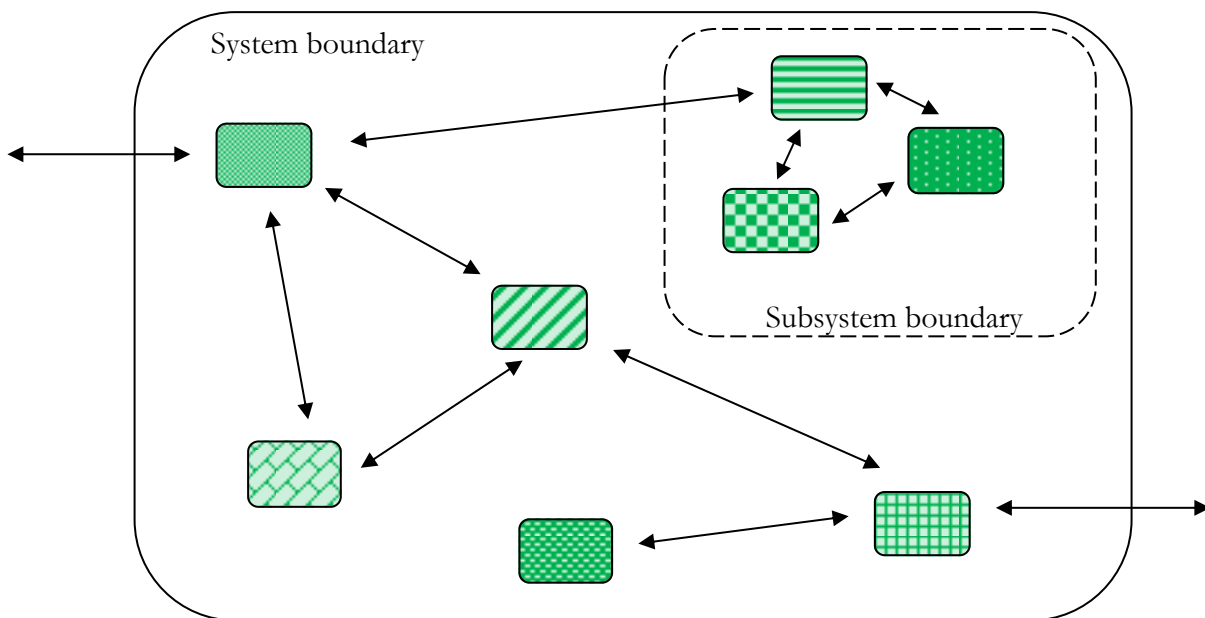


Figure 2-1 System components and boundaries.

This notion of a system is commonly used within technological research. Yet technological systems should not be equated to ‘mere’ technology. Stankiewicz and Carlsson assert:

A technological system is defined as a dynamic network of agents interacting in a specific economic/industrial area under a particular institutional infrastructure and involved in the generation, diffusion, and utilization of technology. Technological systems are defined in terms of knowledge/competence rather than flows of ordinary goods and services.

(Stankiewicz and Carlsson, 1991: 93)

Defined as such, a systems approach becomes highly viable for social studies, as components, links and constant interaction are the basis of a system rather than any particular thing or type of technology. Elaborating on this notion, Bertalanffy defines the very core of social science as ‘*the science of social systems*’ (Bertalanffy, 1968: 195, italics in original). While this may seem a trivial statement, it nevertheless has profound implications for the study of social phenomena as these, following the notion that the sum of a system is greater than its parts, cannot be studied in isolation. While recognising the problematic interdisciplinary implications of applying a fully-fledged systems approach to a wide spectra of social sciences (including psychology, anthropology, political science, and linguistics), Bertalanffy asserts that system concepts such as communication, information, and, not least, feedback are fundamental to all social interaction. ‘The many attempts’, he concludes, ‘to provide theoretical formulations [in the social sciences] are all elaborations of the concept of system or some synonym in this realm. Ultimately the problem of human history looms as the widest possible application of the systems idea.’ (Bertalanffy, 1968: 195). The linkages between natural, technical, and social systems are further developed within ecological economics (Boulding, 1945; 1966; Meadows et al., 1972; Daly, 1991; Daly, 2008) as well as by evolutionary economics (Arthur, 1989; North, 1990), both of which emphasise co-dependence and co-evolution. Socio-technological systems cannot be understood as sets of isolated entities, but rather as complex systems (Unruh, 2000) embedded in practices, productions, policies, and geographies.

A systems approach should not be confused with determinism as system properties are emergent and possibly highly unpredictable. With unpredictability comes the inability to foresee a certain outcome as added layers of complexity multiply possible outcomes (Meadows, 2009). Additionally, the value or use of a particular system outcome is hard to establish as ambiguity – the inability to objectively compare different outcomes – invalidates most system evaluations. How should, for example, a potential outcome of increased industrial activity (including more jobs, increased revenue, social stability etc.) be weighed against water quality? Or social housing compared to biodiversity? System processes are messy, ambiguous, and deeply value-laden.

With all components being part of a larger system and no system being reducible to its parts, applying a systems approach may well lead us to ask if we are able to say anything about anything. The aim of a systems study is not, however, to be evaluative, as prohibited by the inherent uncertainties and ambiguities of any system, but to serve as a cognitive approach (Checkland, 1981). For this thesis, the motivation for starting in the systems approach is first and foremost

the emphasis it places on the connections between the material and the immaterial, stating that both are a developing products of the other (Law, 1992; Meadows, 2009). This very basic assumption is fundamental to the claim that myth and materiality continuously create, transform, and ground each other. Second, a systems perspective recognises system components, of which myth, as will be discussed later on, is one. Myth does not work in isolation, but is part of larger structures that include actors (storytellers), materiality, practices, and links. Third, a systems perspective is the basis of any notion and discussion of processes of lock-in, which addresses the prevalence of systems over time.

## 2.2 Lock-in

Importantly, systems do not become entirely autonomous, but rather acquire momentum (Hughes, 1987). They are the result of a great many forces which merge in time and space; materialities as well as actors and organisations which are committed to the system on the basis of various forms of interest, be they cultural, financial, habitual, ethical etc. Momentum, then, is achieved partly due to the vested interests actors have in the durability and growth of the system, giving the system ‘a quality that is analogous, therefore, to inertia of motion.’ (Hughes, 1987: 76).

While the process of lock-in is well-known within and researched by a wide variety of the natural sciences, in the social sciences the concept of *path dependence* is more widely adopted, most often found within historical sociology (Tilly, 1988; Griffin, 1993; Mahoney, 2000). Yet while the use of the concept of path-dependence is well established, its definition remains somewhat blurred (Mahoney, 2000). On the much cited definition by Sewell – ‘that what has happened at an earlier point in time will affect the possible outcomes of a sequence of events occurring at a later point in time’ (Sewell, 1996: 262f) – for example, follows that path-dependence is merely a case of early events asserting some influence over later events. Mahoney asserts that with a conceptual understanding so vague and superficial, the study of path-dependence within the social sciences may not amount to anything more than a ‘faddish trend’ (Mahoney, 2000: 538). For a process to rightly be called ‘path-dependent’, Mahoney continues, it needs to fulfil criteria beyond the unclear and possibly minor temporal influence. Crucially, the process needs to be traceable back to one or more *contingent* occurrences rather than being explained by a broad set of historical conditions. Contingency, however, should not be confused with complete randomness or as without cause. Rather, a contingent event is ‘an occurrence that was not expected to take place, given certain theoretical understandings of how causal processes work’ (Mahoney, 2000: 513). This can include both small specific events, such as a certain choice made by an individual actor, and large processes, e.g. environmental changes or economic recession.

In self-reinforcing sequences, contingent events lead to critical junctures (Mahoney, 2000), when a particular alternative – technology, institutional organisation etc. – is chosen from two or more alternatives. The juncture is deemed ‘critical’ as the choice made will guide coming events along a particular path from which it gets increasingly hard to diverge, let alone to return to the point where the alternative options were still available. This refutes the notion of complete determinism, as the path to take is not predetermined as such, but rather that, once chosen, it affects future available choices, as expressed by Tilly:

Every existing structure stands in the place of many theoretically possible alternative structures, and its very existence affects the probabilities that the alternatives will ever come into being. In short, social processes are path-dependent.

(Tilly, 1988: 710)

Path-dependence is thus formed as much by social relations as by anything else, or entirely by social relations if one considers all technology to be socially constructed (Bijker et al., 1987).

A critical juncture, alternatively termed ‘turning point’ (Abbott, 1997), is a temporal concept in the sense that ‘[i]t cannot be conceived without reference to two points in time’ (Abbott, 2001: 25). The chronological order of events is itself crucial. Contrary to general linear sociological model, where ‘cause cannot flow from “small” to “large” attributes/events’ (Abbott, 1988: 169), path-dependence emphasises how small events which occur early in the process steer later events. Arthur (1994) illustrates the importance of time by the Pólya urn experiment, where a coloured ball is drawn from an urn one at a time. Each ball that is drawn is put back into the urn along with another ball of the same colour and, thus, results in a self-increasing property, increasing the likelihood that another ball of that same colour is drawn again next time. The order in which events happen is, consequently, a strong determinant for *how* the happen.

Once a path, or approach, has been chosen, the re-enforcing process of feedback (Wiener, 1961), also termed increasing returns (Arthur, 1994), becomes vital. The process of increasing return is most commonly used in relation to *economies of scale*, where cost per unit production decreases as fixed expenditures are spread over increased production volume (Frisch, 1965). Nearly as widespread is the concept of *learning economies*, where acquired knowledge and specialised skills lead to optimised performance (Arrow, 1962). More relevant to this discussion, however, is a broad application of a *network economy* (Arthur, 1994) which emerges through the symbiotic relationship between social and technological, or material, systems. Early choices in technological and organisational systems create co-path-dependence where one continuously re-enforces the other. Similarly, a routinisation of management creates ‘rules of thumb’ which implicitly specify standard operating procedures. While such procedure specialisation can lead to significant improvements *within* the chosen system, they also create barrier effects which halt or postpone a necessary and sometimes inevitable system change (Grubler, 1990). Network externalities – ‘arising from systemic relations among technologies, infrastructures, interdependent industries and users’ (Unruh, 2000: 822) – further intensify the lock-in processes as both material and non-material networks gain added value from their expansion. Both primary and secondary systems increase in value as the network(s) grows.

Lock-in, however, does not only apply to cases of increasing returns. Studies of decision-making in the face of negative feedbacks has shown lock-in, or ‘knee-deep in the big muddy’ (Staw, 1976), to be remarkably resistant even in the face of neutral or negative feedbacks as both groups and individuals choose to escalate rather than decrease commitment even after the faulty premises have been made obvious (Staw, 1976; Staw, 1981; Bazerman et al., 1984; Gunia et al., 2009). The process can be illustrated as a rudimentary yet illustrative push-pull model, where relatively minor positive feedbacks early on in the process lead to a ‘bowl-effect’. Similarly, Tilly (1988) uses the concept of ‘residue’ to describe lock-in of social systems, stating that:

The linking idea is simple and powerful: past social relations and their residues - material, ideological, and otherwise - constrain present social relations, and consequently their residues as well.

(Tilly, 1988: 710)

The multiplicity of these residues substantiate the assertion that lock-in is a result of several system elements interconnecting – material as well as social, cultural, and ideological. In addition, larger systems with high momentum may exert influence upon on other systems, groups, and individuals in society (Hughes, 1987)], emphasising interconnection not only within systems, but between systems as well as between systems and other social elements.

Lock-in, then, is the result of path-dependent properties of social and material systems; a process which stresses interconnectedness and the vital role of social processes. Even so, the role of social processes are often less pronounced in lock-in research to the benefit of technological or material elements, leaving non-material factors and processes assumed, yet unexplored. Perception or belief is one such undeveloped factor, even though ‘ways of seeing’ may well be recognised as the foundation of ‘ways of doing’. The lock-in of beliefs, or the lock-in of the mind, may well be, at the same time, one of the most central and one of the least understood processes of lock-in to date. This dissertation, therefore, continues by exploring the role of naturalised beliefs – myths – in the process of lock-in, starting with the suggestion that the system problem addressed in this dissertation – mobility lock-in – is of a particularly wicked kind and that wicked problems need their stories.



## 3 Getting to the wicked root of the problem

### 3.1 Introduction

To reiterate, the aim of this thesis is to explore if and if so how myth may aid in the perpetuation of mobility lock-in (thus hindering a transition to sustainable mobility) by naturalising and legitimising continued high levels of mobility. As has been presented above, this will be done from a systems perspective where the material and the myth not only co-exist, but cooperate to create system lock-in. In this section, we move on to the very character of the issue of mobility lock-in, defining it as a ‘wicked problem’ and stating that, as such, it is both open to and dependent on a naturalised narrative framework or myth.

Many of the problems of mobility root in issues of management. Is the solution to make mobility increasingly collective, thus intensifying our efforts for developing public transit, or is mobility an individual right, thus obliging us to make mobility, or the increasingly preferred but often synonymous term of ‘accessibility’, readily available for all members of society? Can the problems caused by mobility be solved by improving mobility technologies, including alternative fuels and materials, or have we reached the point where any benefits arising from technological developments are eaten up by problems of sheer scale? And, perhaps the most relevant and by far hardest question of all, should we have more or less mobility and for whom? The multitude of questions and the even greater number of possible answers leads us to ask if the problem may lie in the intricate and ‘wicked’ nature of the problem itself.

### 3.2 The wickedness of mobility lock-in

Mobility, in itself, is not a problem. Lock-in of a system of continuously rising mobility, however, is. The problem with such a lock-in concerns the fundamental reality of limits. Some of these limits are connected to the direct side-effects which we most often associate with mobility: noise, congestion, emissions. Due to the bias towards these particular limits, discussion thus far has been predominantly, almost exclusively, centred on the car (e.g. Dupuy, 1999; Miller, 2001; Edensor, 2004; Gartman, 2004; Urry, 2004; 2008; Kingsley and Urry, 2009; Merriman, 2009; Sperling and Gordon, 2009). From the perspective of lock-in, the car has been at the axis both as a technological lock-in (Geels, 2005) and as a lock-in driven by the alignment of social, economic, and technical elements (Unruh, 2000; 2002; 2006). But while the car is in many ways responsible for some of the most pressing issues of mobility, it does not set the only limits associated with system lock-in. Even with a complete transition to so called ‘green modes’ of transport – bus, train, bicycle, etc. – many of the same limits that apply. A bus can accommodate for a limited number of passengers, roads can accommodate for a limited number of buses. Train tracks may take up considerably less space than do roads (Loukopoulos, 2005), yet they do require a substantial area and have very definite capacity limits which cannot be increased without further spending (of space, time, and money). Additional limits are set by economic capacity, material availability, and visions of what constitutes the good society. Considering the immense societal

importance of the very practice of mobility, by any mode of transport, discussions of mobility lock-in have therefore been surprisingly limited. As long as the process of lock-in demands continuous growth, any changes *within* the system will always be temporary, not permanent. Endless expansion in a world ruled by limits will never be possible; a fundamental statement which emphasises the temporal aspect as lock-in is not merely a contemporary problem, but a problem of the future as it becomes increasingly difficult to digress from the chosen path (Hughes, 1987; Arthur, 1994; Mahoney, 2000).

The problem, then, is here defined as the very system lock-in itself as it both entails continuous expansion and as it, in its (or rather in its actors) desire to uphold itself, rejects systemic alternatives by defining notions of progress which are aligned with its own purposes (Dosi, 1982; Freeman and Perez, 1988). The issue of limits is addressed in paper three, where consequences of a mobility lock-in legitimised by myth is empirically traced through the case-study of the city of Malmö and two types – infrastructural and institutional – of mobility lock-in. This section does not address the empirical material further, but rather aims to place the problem of mobility lock-in in a conceptual framework which will, in the next section, be used as a basis for discussing the role of myth as a naturaliser of wicked problems.

Rittel and Webber (1973) assert that one of the greatest difficulties a problem poses is that of defining and locating it. Even having done so, an equally great problem is recognising the actions by which we can narrow the gap between what-is and what-ought-to-be. They state:

As we seek to improve the effectiveness of actions in pursuit of valued outcomes, as system boundaries get stretched, and as we become more sophisticated about the complex workings of open societal systems, it becomes ever more difficult to make the planning idea operational. (Rittel and Webber, 1973: 159)

As ill-defined problems reliant on elusive judgement, societal problems, as opposed to problems in the natural sciences, are ‘inherently wicked’ (Rittel and Webber, 1973: 160). ‘Wicked’ is here used in the sense of malignant, vicious, tricky (like a leprechaun) or aggressive, but only to denote the character of the problem, not the intent. There is no fixed definition of a wicked problem. Instead, there are a number of characteristics which identify a wicked problem (see table 3-1).

### **Characteristics of wicked problems**

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1. There is no definitive formulation of a wicked problem
  2. Wicked problems have no stopping rule
  3. Solutions to wicked problems are not true-or-false, but good-or-bad
  4. There is no immediate and no ultimate test of a solution to a wicked problem
  5. Every solution to a wicked problem is a "one-shot operation"; because there is no opportunity to learn by trial-and-error, every attempt counts significantly
  6. Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan
  7. Every wicked problem is essentially unique
  8. Every wicked problem can be considered to be a symptom of another problem
  9. Discrepancies in solution result can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution
  10. The planner has no right to be wrong
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Table 3-1 Wicked problems, Rittel and Webber, 1973

One may, at a closer look, find a few of the characteristics on Rittel and Webber's ten point list to overlap (Norton, 2012). Numbers 1, 2, 3 and 9, for example, all address issues concerning problem formulation. But as the purpose here is not to elaborate on the idea of wicked problems as such, but rather to propose a connection between wicked problems and the use of naturalising myths, this will not be discussed further.<sup>1</sup>

The first and possibly most basic of the ten characteristics is that '[t]he formulation of a wicked problem is the problem' (Rittel and Webber, 1973: 161). In order to begin to understand a wicked problem, one must understand its possible solutions, i.e. any discussion of the nature of a mobility related problem requires at least a rudimentary grasp of plausible resolutions. If ecologically sustainable mobility is what we're after, that might include reducing air pollutants and the problem, thus, should specifically include the dilemma of emissions. If we are including, as has become custom, social and economic factors, the problem becomes something entirely different.

Second, there is no finite solution to a wicked problem. Anyone working towards solving such a problem does not stop because he/she has solved it, but because he/she runs out of time, money, or strength, deciding that 'considering the limits of my ability/funding/time, this is when and where I stop' (Rittel and Webber, 1973).

Third, wicked problems are not contrasted in terms of true or false, but of good and bad. One cannot prove any one solution to a wicked problem to be 'right' as it may have many equally valid solutions judged by many equally valid parties based on many equally valid parameters. As verification grows increasingly difficult, ideology becomes essential, i.e. judging solutions in terms of 'better' or 'worse' based on societal and/or individual dogmas (Rittel and Webber, 1973).

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<sup>1</sup> For a sub-categorisation of Rittel and Webber's ten characteristics, see Norton, 2012.

Relatedly, the fourth characteristic states that there is no ultimate test by which one can judge a solution to a wicked problem. In addition, any solution to a wicked problem will alter its conditions, as it causes consequences which are extended over both time and space and which may even be counter-productive:

The next day's consequences of the solution may yield utterly undesirable repercussions which outweigh the intended advantages or the advantages accomplished hitherto. In such cases, one would have been better off if the plan had never been carried out.

(Rittel and Webber, 1973: 163)

Fifth, as every attempt at a solution has consequences, every attempt counts. While learning by trial-and-error may be helpful for the continued understanding of the problem, it also leaves traces which cannot be removed (Rittel and Webber, 1973). The consequences of these trials will then be part of the new problem definition. This characteristic can be likened with the concept of 'residue', presented by Tilly (1988) earlier, or, in the case of feed-back loops which enforce existing practice, the very notion of path-dependence or lock-in itself (Staw, 1976; Staw, 1981; Bazerman et al., 1984; Gunia et al., 2009).

Sixth, there aren't a fixed number of solutions to a wicked problem, nor is there a specific set of acceptable functions that may be incorporated into the solution. For some wicked problems no solution is found, but more often a variety of solutions can be imagined and many more solutions are never thought of at all. Again, judgement, or ideology, becomes pivotal as one must decide which solution to adopt out of a host of both known and unknown options (Rittel and Webber, 1973).

The seventh characteristic emphasises the essential uniqueness of every wicked problem. They cannot be divided into sub-categorises, such as classes, and therefore no principles of solution can be developed. Even with ostensible similarities, the particulars of a wicked problem set it completely apart. Here, Rittel and Webber stress contextuality as a particularity, stating that a problem, and therefore its solution, that seem similar at first glance may hide considerable differences due to location, social structures, local practices, and individual preferences. A 'one-size-fits-all' approach may therefore not only be impractical, but positively harmful (Rittel and Webber, 1973). This characteristic is, of course, especially relevant for studies in human geography, accentuating the particulars of place.

The eighth characteristic touches upon another of geography's basic concepts, scale. It conditions a wicked problem to be a symptom of another problem and asserts that the removal of one cause therefore leads us to another, e.g. climate change may be a symptom of increased material use which, in turn, may be a symptom of a 'cowboy economy' (Boulding, 1966), which, in turn, may be a symptom of a capitalist system etc. There are no logical grounds on which the conceptual level of the problem can be settled as there is no such thing as a 'natural level' of a wicked problem (Rittel and Webber, 1973: 165). Related to this is the issue of incrementalism. Addressing the problem on a too low a level, hoping to contribute to an overall systematic improvement, may result in a worsening of the problem as organisational patterns may override individual ambition. This, in turn, may make it harder to address the problem on a higher level

further on as minor or even marginal improvements do not necessarily lead to overall improvement and could, counterproductively, instead serve to reinforce current patterns (Rittel and Webber, 1973: 165). Incrementalism, then, may lead to lock-in as marginal improvement, while addressing one aspect of the problem, enables the higher systems to endure and increases the costs of change.

The ninth characteristic states that any discrepancy between the desired and actual outcome of a solution can be explained by drawing conclusions that are difficult or even impossible to invalidate. The choice of explanation, in turn, governs the nature of the problem's continued solution, e.g. action X did not have the expected effect of lowering Y because of intervening process Z, meaning Z must be eliminated; or action X *did* have an effect on Y, because if we had not done X, then Y would have been even greater, meaning we should escalate solution X. In essence, because a wicked problem is unique and because any attempt to solve it changes it, no conclusive test can be made of the 'effectiveness' or 'correctness' of the chosen solution (Rittel and Webber, 1973).

Finally, characteristic ten strips the planner (the solution enactor) of his or her right to be wrong. As the effects of the chosen solution are both very much real and irrevocable, the influence they assert over people's lives cannot be reversed (Rittel and Webber, 1973). Again, this characteristic is reminiscent of the notion of residue (Tilly, 1988) or 'knee-deep-in-the-big-muddy' (Staw, 1976).

An underlying and unifying aspect of all ten characteristics is the involvement of conflicting values (Norton, 2012), hindering both mutual formulations of a solution, but also, and more importantly, a mutual understanding of the problem as such.

Claiming mobility lock-in to be a wicked problem, based on the ten characteristics just presented, can hardly be considered provocative. But the main point to be made here is not that it is a wicked problem, but rather to consider what follows on this classification. Meadows (2009) states:

Listen to any discussion, in your family or a committee meeting at work or among pundits in the media, and watch people leap to solutions, usually in 'predict, control, or impose your will' mode, without having paid any attention to what the system is doing and why it's doing it.

(Meadows, 2009: 171)

What follows, then, on the definition of mobility lock-in as a wicked problem is that with all the characteristics it entails – no clear definition; no stopping rule; being judged in terms of good and bad, not right and wrong; no test of solution accuracy; irrevocability; innumerable possible solutions; essentially unique; problem symptomatic rather than problem reducible; justifiable in its solution failure; and without any margin of error – a wicked problem is fundamentally open and, as such, relies not on objectivity but on a mutual understanding of multiple and possibly conflicting values. The lack of a mutually definable, rationally, and ultimately solvable problem requires story context.

## 4 Naturalising wicked problems

### 4.1 Introduction

Categorised as a wicked problem, mobility lock-in and its solutions are elusive, endless, conditioning, open-ended, unique, symptomatic, and inherently Manichean. On the basis of such characteristics, any solution or path is open for dispute, any direction is divisive. Yet paths and directions must be and are chosen, creating a problem of option legitimisation.

To further add to the intricacy of the problem of problems, the systems approach requires us to consider the systemic interconnections, a consideration made particularly difficult by the trans-boundary nature of wicked problems as these tend to ‘spill over’ system boundaries, overlapping several systems and sub-systems. The problem then becomes one of boundaries of systems and their sub-systems and the prohibiting effect wicked problems have on seeing a larger picture, or the ‘real’ problem, which transgresses system boundaries. Actors that have to deal with wicked problems, or ‘managers’ to use Ackoff’s (1979) terminology, are thus presented with extraordinarily complex problems with flowing and diffuse boundaries. Direction, contextualisation, delimitations, and legitimisation are thus needed for dealing with the wicked problem of mobility lock-in. What a wicked problem needs is myth.

The use of the concept of myth within geographical research is the topic of paper one and will not be elaborated on further in this section. Instead, the kappa takes the opportunity to expand further on the concept of myth as such and to connect it to the overall theoretical framework of a systems approach and lock-in.

### 4.2 Myth

In all critical moments of man’s life, the radical forces that resist the rise of the old mythical conceptions are no longer sure of themselves. In these moments the time for myths has come again.  
(Cassirer, 1946b: 280)

Grant asserts that ‘[f]ew endeavours would appear to be more useless than a consideration of myth, if myth is taken on the sense in which it is generally used’ (Grant, 1998: 1). In myth theory, however, myth is not to be mistaken for what has become its conventional use, i.e. analogous to a misconception or, worse yet, a lie. Rather, a myth is a naturalised and emplotted story. The study of myth is aimed at understanding the multifaceted ways in which beliefs are formed, perpetuated, transformed, and communicated through language as well as place.

Myths are the stories we tell in order to give order and interconnected meaning to events, especially in processes and situations which require explanation and/or justification (Arlow, 1961). As such, they have a socialising effect based on the adoption, cementation, and legitimisation of ideology. The ideology is not pre-determined, but rather chosen, based on

political interest (Tismaneanu, 1998a; Cassirer, 1946b), hierarchal structures (Schöpflin and Hosking, 1997) or ruling norms (Barthes, 1972), making myth 'ideology in narrative form' (Lincoln, 1999: xii).

The form or format of a myth is that of speech in its widest sense, including symbols, pictures, and texts (Barthes, 1972). While the interest which exploits or adheres to a myth may indeed be political, the myth as such is depoliticised in the sense that it is not perceived of as political but rather as 'obvious' or better yet 'natural' (Barthes, 1972; 1982 ). Importantly, it is that which is perceived of as natural that is of interest rather than anything resembling 'rules of nature'. The naturalised is entirely defined by its cultural, spatial, social, and temporal context and is as such heavily value-laden.

The naturalising effect is the most central function of myth as it makes that which is created seem self-evident or inherent (Barthes, 1972; Segal, 2004). As such, myth represents not the extraordinary, but the ordinary, the mundane or those 'commitments in life that are so basic and assumed that we normally do not notice them, much less reflect on them' (Grant, 1998: ix).

The process of naturalisation relies entirely on the function of emplotment (White, 1973) by which events are chronologically coordinated, creating a notion of interconnectedness and natural unfolding. A fully naturalised myth may be regarded as common sense, commonly and forcefully presented with the addendum of 'of course', e.g. 'of course, we know that only democratic countries have civil liberties'. Events in a myth seem naturally interconnected; A leads to B which leads to C, or, as in the example above, democracy gives power to the people who will demand civil rights, or the opposite: 'of course, autocracy curtails citizen power which leads to limited or non-existent civil liberties'. The potential of the myth, then, lies in its ability to evade critical consideration and it thus holds 'authority by recognition, authority by "common sense", or authority by compatibility with the greater world' (Hall, 2006: 5f). As such, myth is constituted by its ability to transform history into nature, making the myth 'a statement of facts' (Barthes, 1972: 143). For this process neologism needed, i.e. 'ephemeral concepts, in connection with limited contingencies' (Barthes, 1972: 121), also known as coinage, buzzwords, or newspeak (Orwell, 1949). New or modified meaning can be given to concepts or new concepts can be created altogether. Reiterating these words or concepts in the context of the emplotted myth cements meaning, ultimately naturalising it, making myth 'an unquestioned belief held in common by a large group of people that gives particular meaning to events and actions' (Edelman, 1971: 53).

Myth affects practices as well as materialities. Following a myth-ritualist perspective, myth does not stand alone but is tied to practice and is thus not just a statement, but an action (Segal, 2004). Ritual, here, is the enactment; the articulation and practice of myth (Schöpflin and Hosking, 1997). It should not be mistaken for ceremonial, formalised, or sacred practice, but should rather be seen as the everyday practices which remain unreflected upon; those practices we take for granted as extensions of our naturalised beliefs. Myth, then, informs action and, consequently, material as well as social structures and structuration (Hall, 2006).

Myths, in other words, are highly spatial and linked to their space and place. While analogous myths can be found across societies, they are nevertheless bound to their specific contexts as demonstrated by the variability of application, meaning, and desired outcome attributed to them. Correspondingly, all places have myths which affect their spatial realities. Myth and materiality

constantly inform each other as the character of the world is moulded by intent (Lowenthal, 1961). Place, in this view, ‘serves as a vast mnemonic system for the retention of group history and ideals’ (Lynch, 1960: 126).

Myths belong to all societies and all ages of man (Lévi-Strauss, 1978), but their presence becomes more prominent as we face issues with no immediate solutions or questions with no clear answers. Walker therefore defines myth as ‘a story that tries to come to terms with, and provide resolution to, something that is beyond our grasp’ (Walker, 2003: 7). Similarly, Arlow (1961) asserts that myths come into play in situations where societal beliefs require justification.

The notion of fear is central to myth. Myths are especially equipped to deal with fear as they both name that which we fear (Hall, 2006) – e.g. economic recession – as well as provide the solution – e.g. stimulus packages. This ‘psychological factor’ (Malinowski, 1954) of myth, i.e. its ability to help us cope with fear of a named yet not entirely understood enemy, constitutes one of its strongest appeals.

Finally, myth is a plot of transcendence. As a temporal as well as a spatial narrative, myth is the dialectic of past and future (Ricour, 1986) where change is central. While the change can be both for the worse (should you not follow its sense morale) or the better (should you stay true to the myth’s quintessence), change over time is crucial.

It is exceedingly important to emphasise that myth, in the sense the concept is used within myth theory, is not equal to a lie, a misconception, or a delusion. Myths do not derive their power from facts, but from a belief so strong that it has bearing on everyday practice (Overing, 1997; Segal, 2004; Hall, 2006). A myth may be entirely false or it may contain grains of truth, but as the core of the myth is practice as enacted through naturalised beliefs, truth becomes a non-issue for the very adoption of myth (Hall, 2006). Consequently, a myth cannot be refuted by facts as myths are ‘sets of beliefs whose foundations transcend logic; no empirical evidence can shatter their pseudo-cognitive immunity’ (Tismaneanu, 1998a: 9). Similar to children’s games of role-play, the myth is the adult’s game of make-believe (Winnicott, 1971). Holding on to an internalised object such as myth, the legitimacy of which is recognised by other member constituents or our fellow ‘game-players’, is a way to deal with the wider world and our role in it. Similarly, Lowenthal states that ‘[w]e are captives even of our adult histories’ (Lowenthal, 1961: 259) and that ‘[w]hat we accept as true or real depends not only on what we think we know about the external world but on what we have previously believed’ (Lowenthal, 1961: 259f). What is invested in and conveyed by the myth, then, is a shared recognition of the rules of the game, or a certain perceived knowledge of reality rather than reality itself (Barthes, 1972). In this way, ‘[m]yth creates an intellectual and cognitive monopoly in that it seeks to establish the sole way of ordering the world and defining world-views’ (Schöpflin and Hosking, 1997: 19).

#### 4.3 Myth in systems & lock-in

Already we can see that myth holds many of the characteristics, or qualities, lacking in wicked problems, including contextualisation, naturalisation, legitimisation, and directionality. This section will discuss how these qualities of myth may not only be useful for framing and managing wicked problems, but how they are *necessary* to do so. Wicked problems cannot be addressed



through an idealised planning system as a ‘plurality of objectives held by pluralities of politics makes it impossible to pursue unitary aims’ (Rittel and Webber, 1973: 160). Instead, wicked problems and their solutions rely entirely on agreement; an unwritten contract of problem definition and resolution. Creating these contracts result in assumptions and, as institutional practice, rules of thumb which are fundamental components of lock-in processes. The remainder of this section will be devoted to discuss the intricate bond between the diffuse and non-directional character of a wicked problem, the guiding and naturalising qualities of myth, and the resulting outcome of systemic lock-in.

Myth is not a concept commonly used within systems theory or in relation to the process of lock-in, yet its characteristics are noted, chiefly the importance of belief. Arthur states:

When the *actual* stochastic process that results from these beliefs is identical with the *believed* stochastic process, we have a rational-expectations fulfilled-equilibrium process. (...). Under increasing returns, rational expectations also yield an absorbing random walk, but one where expectations of lock-in hasten lock-in, narrowing the absorption barriers and worsening the fundamental market instability.

(Arthur, 1989: 123, italics in original)

In essence, belief accelerates the process of lock-in by verifying the ‘correctness’ of the chosen approach or path and rejecting alternatives (Dosi, 1982; Freeman and Perez, 1988). Naturalised beliefs result in specific expectations which are in accordance to the adopted myth, expectations which direct intention into action. Increasing returns, in this situation, are not of a financial or material character, but are composed of reinforced beliefs. However, as there are no right or ultimate solutions to wicked problems, should the believed or anticipated expectations not be fulfilled, explanations can be found which rationalise failure such as ‘we didn’t do enough of it’, or ‘the vision holds true, but other circumstances intervened’ (Meadows, 2009). Finding solutions to a wicked problem thus relies heavily on our personal belief of what is right.

Similarly, Meadows (2009) states that wicked problems tend to be defined as the lack of one’s preferred solution, rather than as a result of its underlying causes: ‘the problem is, we need more buses’, ‘the problem is, we need to ban guns’, ‘the problem is, we need to increase export’. Such a framing, however, would not be possible without a certain degree of general acceptance, not necessarily of the individually preferred solution, but of the ‘naturalness’ of the line of argument.

Black (2001) notes how the gap between ‘what is expected’ and ‘what happens’ can be bridged by the rationality of myth. Even in grand infrastructural failures such as the freeways in Indiana, US, where usage is at 1/16 of capacity (Black, 2001), myths of prosperity through mobility live on because the big projects and the myths used to justify them are simply so popular (Black, 2001). Furthermore, Black states, planners often show a strong bias towards their own visions and ambitions, or hopes and dreams, which may blind them to actual costs and failed outcomes (Black, 2001). The role of the myth, then, is to add directionality to and rationalisation of the chosen solution to a wicked problem, even in situations when failure seems plausible or even apparent.

While the concept of myth may not be commonly used within lock-in research, lock-in or entrenchment is a recurrent subject within myth research. Barthes (1972) argues that myth itself

holds qualities prone to create and, even more so, sustain hegemonies. As a naturaliser of bourgeois norms, myth, according to Barthes, has the role of legitimising social order and cementing hierarchies (Barthes, 1972; 1979; 1982 ). The myth achieves this mainly by depoliticising the language, i.e. robbing it of its political meaning and infusing it with a meaning that aligns better with ruling interests. Words such as ‘freedom’ or ‘development’ come to hold specific meanings which naturalise ruling practice as ‘good’ or ‘right’ or ‘natural’. This political use of myth is further noted by Tismaneanu (1998a) who sees the principal function of myth as creating a representation of reality that upholds the values and beliefs of leading political interests. As such, myths are reproducing ruling interests and cultures, limiting the scope of possible choices to those which align with governing structures.

In order to create and sustain this type of social lock-in, repetition is essential (Barthes, 1972). Similarly, Unruh (2000) states that one of the most noted and deep-rooted lock-ins of the past century – the carbon lock-in – finds endurance through semiotic repetition. ‘Repeated exchanges’, Unruh states, ‘can create precedents and standard practices that are rarely questioned, as well as a culture and jargon shared only by the regulators and regulated’ (Unruh, 2000: 825), i.e. neologism.

Lock-in, through the use and contextualisation of myth, is then created and upheld through semiosis. Storytelling becomes a central lock-in practice, placing the *storyteller* (Kearney, 2002) in the limelight. Again, without referring to the concept of myth, this practice or role is noted within lock-in theory. Hughes (1987) stresses the importance of actor influence through the notion of ‘system builders’, stating that as societal processes are marked by pluralism, diversity, uncertainty, and messiness, it is the role of the system builder to create unity and centralisation, or ‘get everyone on board’ (Hughes, 1987). Without system builders, path decisions would be considerably harder as while there may be a unifying force – social belief – there is no actor to verbalise it and to direct practice. Similarly, myth theory accentuates the storyteller’s role of communicating the myth, thereby both forming it and being formed by it. A storyteller is required for the process of repetition by which history is turned into facts, as it is only when ‘haphazard happenings are transformed into story, and thus made memorable over time, that we become full agents of our history’ (Kearney, 2002: 3). Emphasis on a human storyteller is equally an emphasis on human agency; a point well worth making when adapting a systems perspective which on occasion has been (wrongly) regarded as overly structuralistic and de-humanising.

The storyteller, through the myth, creates not only unity, but order – a characteristic entirely lacking in wicked problems. Ackoff states:

Managers are not confronted with problems that are independent of each other, but with dynamic situations that consist of complex systems of changing problems that interact with each other. I call such situations messes. Problems are abstractions extracted from messes by analysis; they are to messes as atoms are to tables and chairs. We experience messes, tables, and chairs; not problems and atoms... Managers do not solve problems; they manage messes.

(Ackoff, 1979: 99)

Yet the inherent messiness of wicked problems makes them extraordinarily difficult to manage. For every chosen solution, every path, innumerable options remain. In addition, the wicked

problem itself is un-definable and constantly contested, making any definition, and therefore any solution, disputable on the basis of faulty problem definition. The role of the myth, and the storyteller, is then to manage these messes, to create cohesion or ‘cosmos out of chaos’ (Overing, 1997: 10).

For creating cohesion around the solution of wicked problems, the chronological function of emplotment – to coordinate and link events spread over time and place (White, 1973) – becomes essential. Meadows (2009) states that one of the most difficult aspects of systems and complex system problems is that they are non-linear. A certain input does not automatically or naturally lead to a certain outcome, nor can several systems or subsystems be added together, resulting in that:

They foil the reasonable expectation that if a little of some cure did a little good, then a lot of it will do a lot of good – or alternately that if a little destructive action caused only a tolerable amount of harm, then more of the same kind of destruction will cause only a bit more.

(Meadows, 2009: 92)

System processes, in other words, do not follow pre-determined or envisioned paths and do not have given storylines, or plots, which can convey expected outcome of actions (or, equally important, non-action). Without the presence of a given plot, system processes therefore need to be actively emplotted.

The active contextualisation through myths or naturalised stories is a noted process in social planning processes, as by Bailey and Bryson (2006) who, in their study of the development of model villages, found that the development was imagined and communicated by storytellers who used processes of simplification and choice to reduce the past to an imposed and arbitrary organised saga (Bailey and Bryson, 2006). The aim is that of social cohesion, a process which requires a poetic, or semantic, act. Similarly, Sørensen & Longva (2011) discuss the concept of ‘discursive coordination’, a process aimed at establishing positive images of both the actual coordination process as well as its partners. The key is to avoid conflicts which may arise from the coordination attempts or from general images related to the coordinating effort. For discursive coordination to work, a storytelling which promotes the desired institutional logic of appropriateness and that influences the behaviour of individuals who are part of the institutional setting is vital (Sørensen and Longva, 2011). These coordinated discourses tend to uphold the ruling system, i.e. system lock-in, as they must be compatible with current organisational cultures in order to avoid being repelled (rejected), decoupled (officially endorsed, but rejected in effect) or encapsulated (exiled to a small isolated unit) (Sørensen and Longva, 2011). The use of these discursive practices in the avoidance of system change is discussed in paper three.

Issues of consistency or unity are vital within myth theory research, as presented by Overing, who asserts that myth is a statement about the social order and that it, as such, underpins social cohesion and functional unity by providing justification of the traditional order (Overing, 1997). Similarly, Schöpflin and Hosking (1997) state that myths are necessary for processes of standardisation. The myths are then enacted through rituals (practices) which create patterns of social behaviour. The control over this standardisation process is a source of power as it

establishes unreflected behaviour. ‘Those who can invoke myth’, they conclude, ‘and establish resonance can mobilize people, exclude others, screen out certain memories, establish solidarity or, indeed, reinforce hierarchy of states and values’ (Schöpflin and Hosking, 1997: 22).

Similar notions have been put forward within many fields that address issues of lock-in. In evolutionary economics, technology is seen to evolve partly through technological (Dosi, 1982) or techno-economic (Freeman and Perez, 1988) paradigms of how technical problems *ought* to be solved. Therefore, insight into the involved actor’s beliefs, i.e. their beliefs in what is feasible or worth trying, is crucial for the overall understanding of any socio-technical change (Nelson and Winter, 1982). In a similar vein, the importance of belief, or perception, is presented as a key factor within studies of socio-technical systems research, where the concept of path-dependence is commonly used; the notion that socio-technical systems follow path-processes where positive feedbacks, increasing returns or positive externalities can create a socio-technological lock-in regardless of the merits of alternative technologies (Arthur, 1989). As discussed earlier, these increasing returns come not only from technical improvements or financial incentives, but also from the beliefs or perceptions which serve to support the system purpose (Hughes, 1987). As these beliefs deepen, the cost of change increases and actors align around practices and technologies that are considered ‘normal’ (Collingridge, 1980). Creating a vision of the path early on in the process, possibly long before any system benefits have had time to emerge, is therefore vital. At this stage, agents must rely heavily on belief in the chosen path as well as in the story that describes it. Ackoff illustrates the importance of belief thus:

I put the following question to [a group of operational researchers]: Suppose you could not conduct an adequate test of your model, what would you do? After considerable squirming the group’s leader said he would ask managers to accept it on faith. Voila and Q.E.D.! (Ackoff, 1979: 97)

Returning to the notion of critical junctures (Mahoney, 2000) – a defining moment when one path is chosen out of a range of equally valid alternatives – it is at these moments that agents have to ‘accept it on faith’. It is then in these moments, when the element of chance is almost tangible, that myth is required to guide and legitimise as well as to remove doubt of anxiety. Malinowski (1954) would claim that it is at these moments that the magical aspect of myth can be seen; a belief in a guiding but invisible hand which steers you towards the right path. Similarly, Barthes states that in these moments ‘myth has the task of giving an historical intention a natural justification, and making contingency appear eternal’ (Barthes, 1972: 142). Following these moments is the process where forces of lock-in become visible as we tend to uphold rather than break ongoing systemic trends. Myths often serve as advocates of a continuation of current practice as much of their power lie in familiarity. Similarly, Boulding states that ‘we see the world the way we see it because it pays us and has paid us to see it that way’ (Boulding, 1956: 50).

#### 4.4 The mobility myth

Mobility, by any and all means of transport, has long been a source of the most fascinating and widely spread myths as well some of the most beguiling characters – the vagabond, the globetrotter, the nomad, the explorer, the voyager, and the pioneer. Mobility is cloaked in myths which are often intrinsically connected to the notion of freedom, an association frequently emphasised in literature, film and, not least, car ads. In this thesis, another, yet possibly even more widely adopted, mobility myth is explored: the myth of prosperity through (more) mobility. The myth is described and discussed in paper two, where focus lies on its role in cementing a natural connectedness between notions of growth, development, and mobility, as well as paper three, where the spotlight is turned on the case of the city of Malmö and its lock-in into a system of high and rising mobility.

According to the myth, mobility is considered a positive force – for society as well as for the individual. Do note that myth is not defined as a misconception or a deliberate lie, but rather as an unquestioned belief that steers practice and, as such, that it plays a key role in the lock-in of, in this case mobility, systems. The system to which the mobility myth belongs is the cowboy economy (Boulding, 1966). In this system, progress is made by continuously exploring and exploiting the vast plains, constantly expanding the frontiers<sup>2</sup>. Development is defined by high throughput and flow and while the system is regarded as exploitative, it also holds romantic connotations of conquests, freedom, domination, and increased standard of living (Boulding, 1966).

High and rising mobility is paramount for the continued expansion of the system, ‘moving on’ is the mantra (Essebo and Baeten, 2012). Semantically, concepts such as, ‘global nodes’, global networks’, ‘enlargement’ and ‘mobility flow’ are central. In the context of Sweden, one of the most used concepts of late has been that of ‘regional enlargement’, to the point where it has ‘appeared as a discursive necessity in order to be able to secure public service and growth’ (Andersson et al., 2006: 111). It ties in with several buzzwords from new economic geography such as cluster, nodes, proximity, innovation, transnational integration, and regionalism (Barnes and Gertler, 1999; Knox and Agnew, 2002), which are presented as the *raison d'être* for regional enlargement policies and processes. The realisation of the geographical imagination of regional enlargement is entirely dependent on mobility for the links that connect spaces and places. To support commuting across municipal or, increasingly frequently, national borders, infrastructural developments are as desirable as they are indispensable. Infrastructural investments are regarded as ‘safe’ (Black, 2001), following the heuristic that growth in transport leads to a direct and positive impact on economic growth (Stead and Banister, 2002). Economic growth and mobility are, according to the myth, inherently connected, locked in a reciprocal relationship where ‘the driving force for transport demand is ultimately economic growth’ (Chapman, 2007: 354), creating a society where the ‘developed world is obsessed with the motor car’ (Chapman, 2007: 357).

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<sup>2</sup> The notion of frontiers is, itself, a vast and fascinating topic for geographical myth (see for example Turner, 1920; Ley, 1974; Melbin, 1978; Livingstone and Harrison, 1980; Bowden, 1992; Waitt and Head, 2002)

Economic growth is considered not only a goal in and by itself, but as the prerequisite on which all social, political, cultural, and environmental progress relies (Spangenberg, 2010). A societal dogma is created where the maximum growth rate is considered to be the optimal growth rate (Spangenberg, 2010). The link between economic progress (defined as growth) and mobility is regularly cited within academia (Stead and Banister, 2002; Chapman, 2007; Essebo and Baeten, 2012) as well as in strategic documents in local, regional, national as well as global contexts, e.g. by the OECD who is a prominent and highly explicit proponent of the myth, stating that:

This interaction [between GDP levels and transport demand] is best seen as a correlation, as in fact the relationship runs both ways: transport drives growth and economic development, and growth drives transport demand. With weak growth prospects and an acute awareness of the need for growth, especially in advanced economies, the interest in transport as a driver of growth and economic development has come to the fore. This translates into a degree of re-balancing of key objectives for the transport sector, and by implication also for transport policy. Focusing on transport as a driver for growth and increased welfare means focussing on the positive contributions of the sector. Of course, what matters are the net positive contributions, so that costs and negative side effects are not suddenly of lesser importance, just less prominent in the debate.

(OECD, 2012: 49)

The importance of a well-developed and used mobility system is most prominently connected to economic growth, but with increased focus on the interconnected triad of economic, ecological, and social sustainability, mobility is seen as part and parcel of an overall societal development strategy:

Of course, mobility is not just there to stimulate economic development. It is also an essential ingredient of the populations' ability to enjoy the benefits of economic development. In other words, mobility potential is a key constituent of economic welfare and wellbeing

(OECD, 2012: 58).

The myth will be exemplified later on in this kappa (section 6) when the case of Malmö is presented and the myth of prosperity through mobility is discussed from an empirical, rather than theoretical, standpoint.

## 5 Methods outlined

### 5.1 Introduction

Studying myth from a geographical perspective in practice has proven to be truly challenging as guiding examples are few. Much of the previous research of myth has been intertwined with its theoretical advancements, leading to an occasionally ad hoc approach to myth theory practice. While the use of myth in geographical research is not new, a number of conceptual pitfalls have led to recurring problems. Most prominently, geographical studies of myth display issues of historicisation or erasation – dating myth or ascribing it to a certain time of man’s history thus making it irrelevant or at least problematic for contemporary application – (e.g. Mills, 1982a; 1982b; Kunze, 1983a; 2009; Olsson, 1991; Lewis and Wigen, 1997; Claval, 2001), formalisation – removing myth from the realm of everyday practice and/or reifying it – (e.g. Livingstone and Harrison, 1980; Olsson, 1991), or conceptual assumption (Lawson and Stockton, 1981; Fellmann, 1986; Dixon and Drakakis-Smith, 1995; Waitt and Head, 2002; Pain, 2006). These issues are discussed in paper one as are some of the possibilities of a more thorough, consistent, and widely applicable use of the concept of myth in human geographic research.

However, while the consideration of the concept of myth in these, and similar, studies may make modelling my own study after their mould difficult, there is plenty research that focuses on similar concepts, such as narrative, discourse and story, the methods of which can be equally applied to myth research.

This section outlines the methods which have been used for my research as well as a presentation of the type of analysis – critical discourse analysis – which has been used to process the material. Before the presentation of the practical choices of method, however, we turn to some examples of myth theory research that addresses the intersection of the questions ‘what’ and ‘how’.

### 5.2 Myth theory research

As a cross-disciplinary concept, myth theory research is transdisciplinary by nature (Segal, 2004). Most commonly, academics who observe and examine the impact of myth are anthropologists, psychologists, literary scholars, or political scientists. The great disciplinary spread of myth researchers has led to a vast variety of interrelated approaches and, consequently, to a broad academic input. Some of these approaches will be presented in this section, as well as some of the examples within human geography that have explicitly considered myth, or a concept closely related and defined, in their research.

Barthes considers myth primarily in its role of establishing and, even more so, sustaining societal hegemony or hierarchy (Barthes, 1968; 1972; 1979; 1982 ; 1986). The myth of Barthes’ is power laden and maintains the hegemonial status quo by naturalising the social order. While strongly focusing on the semiotic aspects of myth, Barthes also emphasises the geographical and

material implications of myth, stating that ‘every myth can have its history and its geography; each is in fact the sign of the other’ (Barthes, 1972: 149) and furthermore that mythology research ‘studies ideas-in-form’ (Barthes, 1972: 112). Myths and materiality are, as discussed earlier, inherently connected and through this reciprocity they uphold hegemonic societal structures. To study myth is therefore to study both the semiotic and the material and, more importantly, the connections that make them reinforce and naturalise each other. Even though never using the word, Barthes’ myth studies are centred on lock-in of social hegemonic systems dominated by inertia.

In contrast to Barthes, Sorel considers myth to be an agent of change (Sorel, 1999). Not only do myths have societal and personal consequences, they are also vital for instigating action as such. Without myths, Sorel asserts, no widespread societal change could ever be achieved as talking about revolution would only ever be empty words. Myths are the initiators of change as they can help us envision alternative ways of organising society by creating coherence and communality among those who wish for change. Myths, then, are found in language as well as in action and in the transformations they cause and can therefore be studied through processes of change.<sup>3</sup>

Whether a tool for change or the protagonist of status quo, Cassirer (1946b) states that the most important aspect of myth is its profound impact as such. Most of all, he asserts, we must identify and study the political myth, the catastrophic consequences of which he himself witnessed during WW II and summarises thus:

When we first heard of the political myths we found them so absurd and incongruous, so fantastic and ludicrous that we could hardly be prevailed upon taking them seriously. By now it has become clear to all of us that this was a great mistake ... We should carefully study the origin, the structure, the methods and the technique of the political myths. We should see the advisory face to face in order to know how to combat him.

(Cassirer, 1946b: 296)

Lévi-Strauss considers, like Barthes, Sorel, and Cassirer, myth to be as much part of modern society as of the primitive. Similarly to Barthes, he emphasises the material by stating that myth is part of the science of the concrete rather than the science of the abstract (Lévi-Strauss, 1966; 1978). Myth is found and studied through observation ‘of the sensible world in sensible terms’ (Lévi-Strauss, 1966: 16); a type of common sense approach to myth studies where the physical world is our myth oyster. Following this devise, he found myth in and through spatial organisations, e.g. in a 16<sup>th</sup> century town, where the dominant societal position held by the church and the nobility was manifested by the overwhelming geographical dominance of their respective buildings. Similarly, Harvey (2009), in discussing the social importance of urban layout, asserts that spatial typography is equally revealing in modern cities, as exemplified by the Chrysler Building, the Oxford church tower, or the Chase-Manhattan Bank. Mythology is thus reflected in social and spatial organisation, and while meanings and their material consequences are objected to change, they do not alter randomly but rather ‘as a part of the process through which society

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<sup>3</sup> For a discussion on the similarities and differences of Barthes’ and Sorel’s, see Tager, 1986.



embraces certain lines of thought in order to rationalize certain lines of action in preference to others' (Harvey, 2009: 12). An explicit use of myth in relation to place is seen in Shields' study of 'place-myths' (synonymously termed 'space-myths') which are '[e]veryday conceptions of ourselves and of the world we live in' (Shields, 1991: 48). Shields asserts that these place-myths form not only our perception of a specific place, by that they also shape societal beliefs into organised and commonly accepted sagas which are enacted through physical structures, i.e. myths transform perception into materiality and can thus be studied through their material outcomes. The spatial aspect of myth is studied in this thesis through regional spatial analysis, i.e. by analysing the spatial outcomes of myth as well as their justification and naturalisation through the myth.

With a similar interest in the impact of belief on spatial development, the before mentioned study by Bailey and Bryson (2006) – analysing the storytelling of planners – applies the concept of stories or sagas (although never explicitly myth) on the development of the model village of Bournville, UK. Through simplification and organisation, they conclude, these storytellers managed to reduce the possible plethora of sagas to a single, coherent, and organised saga which conveyed a unified place perception (Bailey and Bryson, 2006). The focus of study and the gateway to the saga here is the *storyteller*, the same point as made by Kearney (2006), discussed earlier, who emphasises the importance of human agency. Myths, then, are studied through their human medium. The role of the storyteller, similar to actor roles that have been alternatively referred to in the kappa as system builders (Hughes, 1987) or managers (Ackoff, 1979), is here studied through interviews, the method of which will be described further on in this section.

Moving into the realm of psychology, Arlow (1961) stresses the function of myth as a dampener of socially constructed anxiety:

The myth is a particular kind of common experience. It is a special form of shared fantasy, and it serves to bring the individual into relationship with members of his cultural group on the basis of certain common needs. Accordingly, the myth can be studied from the point of view of its function in psychic integration – how it plays a role in warding off feelings of guilt and anxiety, how it constitutes a form of adaptation to reality and to the group in which the individual lives, and how it influences the crystallization of the individual identity and the formation of the superego.

(Arlow, 1961: 375)

Myths can here be found in the justification of actions that fulfil needs – real or imagined – and in the amelioration of fears. With support in societal beliefs, myth acts as an explanation as well as a disclaimer; guiding us when we are lost, legitimising us when we doubt, and bonding us with other members of our social groups (Arlow, 1961). From this perspective, myth can be researched through semiotics in a fashion similar to that of Barthes', with the added component of psychic integration. Again, it is a matter of finding a common belief, or a 'shared fantasy', which is used to legitimise behaviour. This aspect of myth – myth as a means of justification and legitimisation – is here analysed by using critical discourse analysis, which is presented last in this section.

While myth theory practitioners may seem quite diverse at a first glance, a theme which transgresses any and all disciplinary borders is the search for beliefs with paradigmatic status, as myth constitutes a type of paradigmatic truth (Hall, 2006). The pursuit is therefore not for the faulty or the misconstrued, but for that which is taken for granted, for that which is naturalised. This is found both through the agents who communicate and further help substantiate the myth – the storytellers – but also in the physical manifestations of the myth, that which reflects and represents. Thus, the imagined meet the material. Methodologically, it follows that to study myth is to study people and as well as their places. Listening becomes as vital as looking.

### 5.3 Case study

With only a handful of studies for academic support, applying myth theory to a case study has been equal parts urgent and challenging. As has been mentioned, the use of the very concept of myth in geographical research is not unheard of (e.g. Olsson, 1974; 1978; Livingstone and Harrison, 1980; Shields, 1991; Duncan and Duncan, 1992; Buttimer, 1993; Lewis and Wigen, 1997; Claval, 2001; McNeal, 2012), but as has also been mentioned its employment has demonstrated some recurrent weaknesses; historicisation, formalisation and conceptual assumption.

Given both the methodological and conceptual spread of the use of myth in geographical studies, employing the concept in a contemporary geographical case-study has been a learning process in itself, pursuing the rather hopeful device that ‘[i]t is only because of experience with cases that one can at all move from being a beginner to being an expert’ (Flyvbjerg, 2006: 222). Perhaps more realistically, the employment of a case study approach has followed Eysenck’s advice that ‘sometimes we simply have to keep our eyes open and look carefully at individual cases – not in the hope of proving anything, but rather in the hope of learning something!’ (Eysenck, 1976: 9).

While the choice of a case study approach is not given – there is still much room for developing myth theory through application on literal works or through sheer theoretical discussion – as part geographer, part myth theorist I have nevertheless felt that this is where at least part of my contribution may very well lie. Myths are spatial; they are told, interpreted, and enacted somewhere and are thus formed by their spatiality as much as they form it in return. Simplistic as this point may seem, while myths are most often geographically defined – set in Kuala Lumpur or Paris – place is not necessarily explicitly considered but rather implied in many myth studies. By assuming place, we miss one of the most important aspects of myth: representations of space order spatial realities. Myth has geography and, to the degree that space and place are representations of their ideological, cultural and social naturalised beliefs, myth *is* geography. And although it may be true, as Lowenthal claims, that ‘anyone who inspects the world around him is in some measure a geographer’ (Lowenthal, 1961: 242), the place-specific character of myth needs better recognition than guilt by association. Therefore, in the hope of employing as well as exploring myth theory in practice, this dissertation employs a case study approach.

The particular case of the city of Malmö in the Öresund Region was chosen for several reasons, one of which being my previous knowledge of it. I have lived, studied, and worked in the Öresund region (Malmö and Lund), including working as an analyst evaluating Malmö's urban development with particular focus on the development of the Öresund Region cooperation. While my previous knowledge and experiences will certainly influence my job as a researcher, they also provide me with insights which I could not have gotten otherwise, i.e. those of someone whose everyday life entail living in a place, rather than observing it from afar.

Second, the Öresund Region and the city of Malmö were chosen based on their own merits. Malmö is a truly interesting city for studying the lock-in of myth as it has undergone drastic changes in the past decades, transforming from a city characterised by heavy industry and relatively low mobility to a knowledge economy centred on high mobility and regional expansion. Section 6 provides a more extensive presentation of the Öresund Region and the city of Malmö.

## 5.4 Multi-method approach

The methods for collecting material in this study stems from a mixed-method approach (Tashakkori and Cresswell, 2007; Tashakkori and Teddlie, 2003). Similarly to the multi-method approach (Philip and Correlje, 1998; Graham, 1999; Hammersley, 2008), the mixed-method approach uses several methods to augment the span of sources, with the difference that the latter approach bridges the qualitative/quantitative divide. Tashakkori and Teddlie (2003) present three advantages of this approach. First, it allows the study to be both exploratory and confirmatory in its research, i.e. findings from qualitative methods can be pursued in, or through, quantitative data related to the same issue. Second, strengths and weaknesses in each method can be, at least somewhat, counterbalanced by complementary methods. Third, and most relevant for this study, mixed-method research can be used to find deviating or even contradictory findings. Inconsistencies can be cause for re-evaluating conceptual frameworks or methodological choices, but they can also be explanatory contradictions which clarify discrepancies in behaviour, e.g. differences between what people say and what they end up doing. As contradictions between behaviours and beliefs are of central importance to this study, interviews – what people say – are complemented by post-project reports, statistical data, and a large collection of municipal strategic documents outlining mobility plans and visions. The purpose is to trace influences from naturalised shared beliefs – myths – in and through the material as well as in some of the, sometimes contradictory or counterproductive, resulting actions. More specifically, the methods used in this study are in-depth interviews combined with a complementary data collection, including municipal documents and travel surveys, and regional spatial analysis.

### 5.4.1 Interviews

Finding the naturalised beliefs of actors cannot be done without turning to the actors themselves, following the notion that there is no better introduction to a population than the population itself (Dunn, 2005). In other words, in order to find the stories one must listen.

The use of interviews enables documentation of a wide spectrum of experiences, allowing for voices to be heard, representations to be expressed, and interpretations to be made (Smith, 2001). This view of interviews borders on the concept of 'life history' (Atkinson, 1998) which is described as an ethic approach where the telling of stories allows the interviewee to be heard and acknowledged by others. The purpose of the stories is to make 'the implicit explicit, the hidden seen, the unformed formed, and the confusing clear' (Atkinson, 1998: 7).<sup>4</sup>

Yet while verbal accounts are an unsurpassable source of information they can also be highly limited in their relevance to practices as they only generate information of what the interviewees *say* they do rather than what they *actually* do (Valentine, 2001), making interpretation vital. In an interview we interpret the subjects' responses, which, in turn, are interpretations of how they perceive the world (Smith, 2001). After the interview, we yet again interpret the data we have gathered, in an analysis of the responses, what Giddens refers to as 'double hermeneutics' (Giddens, 1984). The notion of double hermeneutics is further developed by Alvesson (2003) who sees the constant interplay between researcher and material as a reflexive process where you, as a researcher, are encouraged to adopt new roles or to study your material from different angles which may not be consistent with your original idea. The reflexive approach entails a constantly shifting and evolving process, where theoretical breakdowns may force you to reconsider your original stance and adjust your research scheme accordingly. The research question is to be thought of as a mystery, which may or may not be solved as the research process progresses (Alvesson and Kärreman, 2007). Similarly, Ley and Mountz (2001) urge the researcher to be surprised by the material, keeping the conversation between it and the researcher alive and evolving.

For the actual process of interviewing, Alvesson (2003) stresses three aspects for consideration. First, he underlines the importance of context i.e. the social scene which includes not only the interviewer and the interviewee, but also your physical setting. Second, you need to keep in mind that the interviewee has his or her own motives and ideas, which, consciously or unconsciously, guide their answers. Third, you need to consider the language itself as words are never 'only' words, but carriers of meaning which will affect the person you are talking to (Alvesson, 2003).

The selection of interviewees is, of course, essential. For the SMILE project (presented in section 6.5), I felt it important to find people from all levels and stages of the project – from project planning and management to actual implementation on an everyday basis. This turned out to be harder than I had expected as the project suffered from a high staff turnover, a problem several of the interviewees addressed both before and during their interviews. But thanks to a few good and helpful contacts in the early stages of the process I managed to interview representatives from all of the project levels (administrators and measure leaders from the Malmö Municipality) as well as the two external evaluators (from the University of Malmö and Lund Technical University) and two representatives from the local transit company (Skånetrafiken) as a large number of the SMILE measures were directed towards increasing public transit patronage (see table 5-1).

The interviews were semi-structured and based on an interview guide that was adapted to fit the role of the interviewee (administrator, measure leader, evaluator, transit company

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<sup>4</sup> For studies using in-depth interviews for the related concept of structural stories, see Freudendal-Pedersen, 2005; 2009

representative). The semi-structured form allowed for the interview to take new directions and for follow-up questions while still maintaining a basic construct (Bryman, 2001; Dunn, 2005). It also permitted for alterations or additions to the interview guide based on responses from the interviewees; a valuable feed-back and one of the great benefits of face-to-face interviews (Dunn, 2005).

Regarding practical issues, a tape-recorder was used for which permission was asked. Prior to the interview the purpose and aim of the study was explained to the respondents. After all the questions had been asked, the interviewees were given opportunity to make amendments should they feel something had not been said or not properly explained. In addition, after the tape recorder had been switched off they had the chance to ask any questions which may have had arisen during the interview. All respondents were promised anonymity except for their project role and affiliation. The interviews were transcribed. The length of the interviews varied from 30 minutes to well over 90 minutes, mostly depending on the extent of role the interviewee had had in the SMILE project and his/her own eagerness to discuss. Quotes used in paper three and the kappa are translated (from Swedish) in a colloquial style, i.e. not necessarily *verbatim* as literal translations often sound artificial or possibly even lose their original meaning.

The concept of myth was not mentioned in the interviews due to the risk of common and negative conceptual connotations such as misconception or lie. Neither was the myth in question – prosperity through mobility – brought up by me in order to avoid putting words in their mouths or corner them into positions where they would find it hard to answer in any other way than in the affirmative, e.g. ‘do you agree that mobility leads to regional development?’. Rather, the questions have all revolved around their ideas of mobility, development, sustainability, and the region and discussions on the positive effects of mobility have only been pursued based on the initiative of the interviewee. However, all interviewees were asked if they considered limited or even reduced mobility to be a viable alternative in trying to achieve sustainable mobility in order to discuss alternatives to the strategy of a mobility shift.

<b>Role in the SMILE project</b>	<b>Affiliation</b>
Site manager, administrator	Municipality of Malmö
Technical co-ordinator, later on project co-ordinator, administrator	Municipality of Malmö
Project leader, administrator	Municipality of Malmö
Site manager, administrator	Municipality of Malmö
Measure leader, administrator	Municipality of Malmö
Measure leader, administrator	Municipality of Malmö
Measure leader, administrator	Municipality of Malmö
Information clerk, administrator	Municipality of Malmö
Evaluator	Lund University
Evaluator	University of Malmö
Strategic development manager	Skånetrafiken
Traffic researcher	Skånetrafiken

Table 5-1 The official role and affiliation of the interviewees

#### 5.4.2 Other data

Originally, this thesis was planned to focus more on the vast documentation resulting from the SMILE project. The project plans, applications, and, most of all, the measure evaluations were devised to act as the backbone of the analysis, focusing more intently on ‘successful measures’ than on the systemic influence of myth. However, as work progressed, the interviews stood out more clearly as the most interesting and relevant source of information, being a direct link into the minds of the people who, in a very real way and on a daily basis, influenced the mobility development of Malmö and the Öresund Region. Practices which were then translated into ‘EU talk’, as one interviewee phrased it, in order to fit the pre-set project format. Extensive and highly formalised administrative duties were referred to as a hindrance also by the evaluators who state that it prevented them from focusing on the thing they believed to have been contracted to do – evaluate – and left the evaluation rather ‘flat’ and far from fulfilling its full potential. As the thesis work progressed, and focus widened to a systemic approach far transgressing the boundaries of the SMILE project, it therefore became increasingly clear that the official SMILE documents

could not act as prime sources of information and analysis. Shifting focus to the systemic aspects of myth, the SMILE project has taken on the position as a systemic ‘symptom’, i.e. analysed as an outcome of the system to which it belongs. This shift in focus means that instead of evaluating individual SMILE measures, which has already been amply done by the project evaluators, the thesis can be devoted to exploring how the myth of progress through mobility has influenced the way in which the project is managed and viewed.

In order to gain a better and more complete understanding of the role of myth in the lock-in of a high mobility system in Malmö, broader, more extensive, and less formalised material had to be found. Most prominently, this material is comprised of extensive municipal strategic documents including Comprehensive Development Plans and mobility development strategies. As the Swedish EU membership influences local and regional development strategies and as mobility has become a prime concern for the development and integration of this supranational structure, several EU policy documents, most significantly the so called White Papers (EC, 1992; 2001; 2006; 2011), have also been included in the analysis. Finally, following up on the myth characteristics of emplotment (White, 1973), storyteller (Kearney, 2002), and reiteration (Barthes, 1972), the myth has been traced in newspaper articles as these are one of the prime and most widespread forms of societal communication.

## 5.5 Critical discourse analysis

With an emphasis on semiotics, it follows that some kind of discourse analysis will be employed. To use discourse analysis is to seek and identify social discourses and to attempt to find deeper understanding of how they give meaning to the world. It is, as such, a pathway into an actor’s understanding of the world as well as into his or her identity (Hansen and Simonsen, 2004). For the purpose of this thesis – aiming at identifying the role of myth in the guidance and legitimisation of mobility lock-in – the most important aspect for analysis is belief, i.e. trying to establish the naturalised and emplotted beliefs (myths) which the interviewees are guided by. This aim is similar to that of identifying hegemonic discourses through the so called ‘denaturalisation perspective’, most commonly used within the tradition of social constructivism which aspires to question the ‘natural’ qualities of social phenomena by asserting that they are historical, geographical, and cultural constructs (Hansen and Simonsen, 2004).

The particular discourse analysis chosen for this thesis, however, stems from another, yet somewhat similar, philosophic tradition: critical realism. Based on the explanatory critique of Bhaskar (Bhaskar, 1975; 1987; 1989), Fairclough (1993; 2001; 2003; Fairclough et al., 2001) presents the method of critical discourse analysis (CDA) where language is considered not only an inherent, but guiding and explanatory element of social development. Language, Fairclough asserts, is an inexorable part of social life and therefore a means for understanding not only what people say, but what they do. It is, furthermore, important to highlight possible discrepancies between words and action. CDA not only acknowledges these potential inconsistencies, but focuses on them by studying the relationship between semiosis and the material world.

It emphasises reasons as causes for action. Reasons, in this context, are not to be mistaken for rational triggers of action, but rather networks of beliefs, symbols, concepts, and texts. Semiosis,

in other words, is considered causal, i.e. an instigator of action and is, as such, highly performative (Fairclough et al., 2001). Semiosis is thus embedded in practices and their material outcomes, an assertion which emphasises the innate connection between the constructed and the construed, or the discursive and the extra-discursive (Luke, 1995/1996).

In exploring this relationship, Fairclough asserts, one addresses the issue of truth as '[n]o account of semiosis can evade the issues of truth, truthfulness, and appropriateness' (Fairclough et al., 2001: 11). Interpretations of texts should, therefore, not only be an attempt at understanding, but at saying something about the 'truth' of the text in order to see the agents' motives for writing or speaking the way they do. Truth, in this sense, is not an essentially objective or measurable truth, but rather other ways of seeing, defining, or, indeed, practicing. As such CDA is a technique for finding assumptions, presuppositions, deceptions, evasions, and rationalisations.

A CDA approach has been employed in the analysis of all the texts, including the interviews, which comprise the empirical body of the study. The texts have been analysed with the aim of finding clear references to the particular myth in question. As the material is substantial, finding single references to a myth cannot be considered categorical. Instead, the search has been for repetitious mentions throughout the different forms of texts (spoken and written) as intention is most clearly identified through insistence (Barthes, 1972).



## **An analytical framework for CDA**

### **Stage 1 Focus upon a social problem that has a semiotic aspect.**

Beginning with a social problem rather than the more conventional 'research question' accords with the critical intent of this approach – the production of knowledge which can lead to emancipatory change.

### **Stage 2 Identify obstacles to the social problem being tackled**

You can do this through analysis of:

- a) The network of practices it is located within
- b) The relationship of semiosis to other elements within the particular practice(s) concerned
- c) The discourse (the semiosis itself) by means of:
  - structural analysis: the order of discourse
  - interactional analysis
  - interdiscursive analysis
  - linguistic and semiotic analysis

The objective here is to understand how the problem arises and how it is rooted in the way social life is organized, by focusing on the obstacles to its resolution – on what makes it more or less intractable.

### **Stage 3 Consider whether the social order (network of practices) 'needs' the problem.**

The point here is to ask whether those who benefit most from the way social life is now organized have an interest in the problem *not* being resolved.

### **Stage 4 Identify possible ways past the obstacles.**

This stage in the framework is a crucial component to Stage 2 – it looks for hitherto unrealized possibilities for change in the way social life is currently organized.

### **Stage 5 Reflect critically on the analysis (Stages 1-4).**

This is not strictly part of Bhaskar's explanatory critique but it is an important addition, requiring the analyst to reflect on where s/he is coming from, and her/his own social positioning.

Figure 5-2 Analytical framework for critical discourse analysis

## 6 The myth in regional mobility lock-in: Malmö, the Öresund Region & SMILE

### 6.1 The city of Malmö

Malmö (see map 6-1), which was founded in the 12<sup>th</sup> century, has the unflattering literal meaning of ‘piles of gravel’. It is located on the southwest coast of Sweden and is, with its 303 000 inhabitants (SCB, 2012), the country’s third largest city after Stockholm and Gothenburg. The city of Malmö has a long history of trade and manufacturing. Its strong industrial roots go back to the 18<sup>th</sup> century when the harbour was built, steering the city’s economy towards heavy production and trade. The bias towards manufacture and trade continued throughout the 18<sup>th</sup>, 19<sup>th</sup> and most of the 20<sup>th</sup> century, as infrastructure was rapidly developed and connectivity increased through the construction of railways and roads. The 20<sup>th</sup> century witnessed a new electric plant, the electrification and expansion of the tramline (removed in the 1970s), new and renovated streets and bridges, and an extension of the city’s sewer system. In 1923, one of Sweden’s first, and soon to be one of Europe’s most important, airfields was built in Malmö (Bulltofta) and for a time, the Copenhagen-Malmö route held the title of the shortest regular link in the world (Dahlgren, 1973). With the economy booming, Malmö, led by a few strong actors predominantly in heavy manufacturing and shipping, soon became one of the leading industrial cities in Sweden (Bjurling, 1971-1994).

Consequently, the industrial crisis of the 1980’s and 1990’s hit Malmö hard, launching the city into years of economic recession as it struggled to rid itself of an industry-shipping lock-in that had lasted for centuries. Most unfortunately, the mass unemployment due to a stagnating manufacturing market coincided with war and turmoil in Eastern Europe and the Balkans, leading to a large influx of refugees into Malmö. The situation became dire, making it clear that only major changes could stop the destructive downward spiral of economic, as well as social, recession.

Since then, the inhabitants of Malmö have indeed experienced far reaching changes as the city has reinvented itself as a service economy with strong emphasis on regional development, higher education, multiculturalism, and tourism. The transformation has included a stimulation and expansion of the university, the creation and relocation (from other parts of Sweden) of small and medium sized business, and major gentrification of the housing stock and commercial areas (Bjurling, 1971-1994). But more than anything, the transformation has centred on the rejuvenation and development of the cross-border cooperation of the Öresund Region; a transnational region spanning south-western Sweden and the eastern parts of Denmark. The 21<sup>st</sup> century also came with major infrastructural changes including the opening of the Öresund Bridge (in 2000); the finalisation of the new, sustainable district of Bo01 (in 2001); the symbolic end to an era as the old gantry crane ‘Kockumskranen’ was dismantled and shipped to South Korea (in 2002); and the construction of the Citytunnel – a major infrastructural project linking up railway connections through a tunnel intersecting some of the most central parts of the city (in 2010).



Map 6-1 The city of Malmö. © Swedish mapping, cadastral, and land registration authority. Dnr: 12012/955  
Produced by Erik Eilidér and Ana Gil Solá.

Spatially, the city of Malmö is built in a succession of concentric rings with turn of the century brick buildings and canals dominating the city centre. In the outer rings we find a mix of areas of low density, single family houses and neighbourhoods dominated by the so called ‘million programme’ which ran during the years 1965-1975 and aimed at building one million accommodations in order to deal with the housing shortage in the cities. These areas have long been subjects of debates concerning segregation and marginalisation, (mis)characterised as ‘the poor man’s functionalism with attributes of Eastern European simplicity’ (Lundevall, 2006: 151).

Today, Malmö is a city characterised by dichotomies: affluent neighbourhoods are contrasted with ghetto-like (by Swedish standards) suburbs; a highly educated work force is juxtaposed by the working class background of the city (and many of its inhabitants); and, perhaps most prominent of all, the old geographically sedentary life-style is weighted against today’s ambulatory practices of high mobility.

## 6.2 The Öresund Region

The very term of the ‘Öresund Region’ was established as late as in the mid-1990s, during the construction of the Öresund Bridge, but the notion of a region started already in the 1950’s when a small group of planners, academics and journalists first initiated an Öresund discourse (Linnros and Hallin, 2001). Over the coming 40 years, the discourse deepened, but it has not always been one of harmony and union. Several issues have sparked conflict over the years, including disputes between national and regional interests; conflicting goals and ambitions of regional actors; and conflicts between proponents and opponents of the Öresund Bridge. The latter conflict was resolved partly due to an increased emphasis on the concepts of sustainable development and ecological modernisation, creating at least a superficial consensus which concealed the cultural politics of environmental conflicts (Linnros and Hallin, 2001).

The city of Malmö is, alongside the Danish capital of Copenhagen, the major urban hub of the Öresund Region – a transnational cooperation incorporating two big cities, a major international airport (Kastrup airport outside of Copenhagen) and several extensive infrastructural developments. The cooperation has had a pronounced focus on higher education, both mirroring and strengthening the fact that the region has the highest concentration of highly educated people in Northern Europe (Örestat, 2013). 3.785.000 million people live in the Öresund Region, a number which is expected to increase to 3.900.000, or with a little over 10 %, by 2030 (Örestat, 2013). Two thirds of the population live on the Danish side. The geographical variation of the region is considerable and contains everything from sparsely populated rural areas in eastern Scania and parts of the Danish islands to bustling cities. The average population density is 179 inhabitants per km<sup>2</sup>; 258 inhabitants per km<sup>2</sup> on the Danish side and 110 inhabitants per km<sup>2</sup> on the Swedish (Örestat, 2013).

Administratively, the Öresund Region consists of three regions: Scania on the Swedish side and Region Hovedstaden and Region Sjælland on the Danish. In 1993, two years after the decision to build the Öresund Bridge, the Öresund Committee was founded; a transnational political interest group with representatives from the regional and municipal authorities on both sides. The Öresund Region is not, however, a political region but rather rely on transnational political

cooperation. There is no formal geographical definition of the Öresund Region, but the predominant classification, supported by the Öresund Committee, includes the region of Scania on the Swedish side and the Danish islands of Zealand, Mön, Falster, Lolland and Bornholm (see map 6-2).

Infrastructurally, the main link connecting the region is the Öresund Bridge, but there is also a northern connection, between the cities of Helsingborg (Sweden) and Helsingör (Denmark), where ferries run every 20 minutes throughout the day.



Map 6-2 The Öresund Region. Produced by Erik Elldér and Ana Gil Solá.

### 6.3 The Öresund Bridge and the City Tunnel

This section provides a short presentation of the main infrastructural developments where the myth of prosperity through mobility has been used for justification and naturalisation. A summary of the main findings regarding the role of myth for infrastructural lock-in is given in the results section (section 7) and an even fuller discussion and analysis of the empirical material can be found in paper three.

The construction of the Öresund Bridge began in 1995; a cross-border cooperation made possible by a long-standing tradition of Malmö/Copenhagen cooperation creating ‘cracks and holes’ (Jensen and Richardson, 2004) in the established territorialities and opening up for a permanent cross-border link. It was finalised in August 1999, three months ahead of schedule, and opened for the public on July 1<sup>st</sup> of 2000 accompanied by much pomp and circumstance.

Technically, the Öresund Bridge is a combined bridge and tunnel of 15.9 kilometres, 7.8 kilometres of which constitutes the actual bridge. At the artificial island of Peberholm (pepper islet), traffic dives down into a tunnel so as to not disturb air traffic at Copenhagen International Airport, Kastrup. The bridge has a double-track railway and a dual carriageway, connecting Scandinavia to Central and Eastern Europe by both rail and road (route E20).

Initial patronage was low, a development that was vociferously blamed on the high tolls. The years of poor commuter turnout came to an end, however, in 2005, and were followed by several years of rapid increase. Effects of the 2008 financial crisis can be seen in a reduction of both vehicle and train transport, yet both modes are now recovering and, in the case of train passengers, are setting new records. The number of car commuters decreased in 2010, but the slack was picked up by leisure traffic, increasing from 203,000 trips in 2010 to 242,000 in 2011 (Øresundsbron, 2011). Commuters are, however, still the largest category of cross-sound travellers, accounting for 40 % of passenger traffic in 2011 (Øresundsbron, 2011). The clear majority – 96 % – of the Öresund commuters live on the Swedish side of the sound (Örestat, 2013). Of these, many, almost 40 %, are Danish citizens who have moved to the Swedish side in order to benefit from cheaper housing and lower cost of living while still enjoying the better paid jobs of the Danish capital. About 100,000 trips across the sound are made every day (Øresundsbron, 2010), the clear majority of which are made via the Öresund Bridge.

With the opening of the Öresund Bridge, railway traffic has increased significantly, stretching capacity thin. With Malmö central station being a terminus station, increased train patronage has put further emphasis on the lack of intra-city flow as there is no way to reach the central parts of Malmö without switching travel modes. In March of 2005, therefore, a second major infrastructural development was launched: the City Tunnel. On December 12<sup>th</sup> of 2010, the new link was opened; a 17 kilometres long railway link, 6 kilometres of which run as a tunnel under central Malmö. It connects with pre-existing railway in Scania, creating a flow throughout the region. The construction required a complete remodelling of Malmö central station, turning it from a terminus station to an open thoroughfare. Two new stations were built in order to cater for the new intra-urban link; Triangeln, in south-central Malmö, and Hyllie, on the southern outskirts of Malmö facing the Öresund Bridge. Triangeln is an area dominated by shopping and the hospital, but is also, in tradition with Swedish city planning, densely populated, making it one of the most bustling areas of the city. Hyllie, in turn, is a scarcely populated area and was, until 8-10 years ago, dominated by fields, meadows, and a water tower. Ambitious plans are, however,

now being made for this area, many of which have already been completed. The plans include an arena (finalised in 2008 and host to the 2013 Eurovision Song Contest), Malmö's biggest parking house (finalised in 2010), the shopping centre 'Emporia' (opened in 2012), Malmö's new exhibition area (opened in 2012), several thousand residences and office buildings (under construction), a water park (planned), and a luxurious hotel sporting a 60 metres high glass façade (planned).

With an open thoroughfare through Malmö, train capacity has been vastly increased and the transport integration of the Malmö-Copenhagen area greatly improved. Travel time between Malmö and Copenhagen has not decreased, as Malmö central station was already the starting point for the train to Copenhagen before the remodelling. Regional mobility flowing *through* Malmö, however, has increased vastly as trains no longer need to turn around in Malmö in order to continue on to cross the Öresund Bridge. In addition, the two stations of Triangeln and Hyllie significantly decrease travel time for a large part of Malmö's inhabitants who do not live close to Malmö central station.

#### 6.4 Institutional setting: SMILE

This section presents the project of SMILE – an EU funded project initiated by the cities of Malmö and Norwich – which is the case study for the analysis of institutional lock-in. For an analysis of the case, see paper three as well as the summary of the main findings presented in the results section of the kappa (section 7).

The rapid increase in intra- and well as inter-urban mobility, resulting from a strategy of regional cooperation based on high mobility or 'flow', has resulted in several mobility related side-effects for the city of Malmö. The decline of Malmö's industrial sector along with an expansion and reconstruction of the city's district heating in the 1980s and 1990s, initially led to a significant decrease of pollution with emissions of fossil carbon dioxide going down by 46 % – the equivalent of 10.4 tons per capita – from 1980 to 2000 (EC, 2009a). Since then, traffic has taken over as the single biggest source of pollution. The streets of central Malmö have not only become increasingly busy, but many of them are also quite narrow, creating further congestion. The air quality of Malmö, which has been monitored for sulphur dioxide and 'suspended dust' (particles) since the 1970s and today includes measurements of nitrogen dioxide, carbon monoxide, ozone, and hydrocarbons, clearly shows the impacts of increased traffic. Data is collected from three fixed measuring points as well as from mobile measuring vehicles and confirms high emission levels along the majority of Malmö's streets, several of which exceed the environmental quality standards for nitrogen dioxide.

In way of addressing the growing concerns for and consequences of traffic, the municipality of Malmö – the administrative authority of the city of Malmö – is continuously developing traffic strategies which aim to monitor and guide both long and short term traffic developments. The *Strategic Traffic Plan* (STP) (Malmö Stad, 2004) is a guiding document in which the main transport objective is stated as providing for the mobility needs and the vitality of the city while minimising negative environmental effects. In addition, a *Traffic Environmental Program* (TEP) (Malmö Stad, 2005b) has been created in cooperation with several governmental and non-governmental actors

in and around Malmö, targeting six defined areas of interest: pedestrian environment, cycle traffic, public transport, freight transport, car traffic, and traffic planning. The document was updated in 2012 to span the years 2012-2017 (Malmö Stad, 2012).

The pronounced focus on monitoring and steering traffic development is part of an overall strategy to characterise the city of Malmö as a 'green city'. The increased attention given to strategies of 'sustainable living' was part of the city's rejuvenation or reinvention starting in the 1990s, a strategy that has gained international attention as well as awards, e.g. the EU's Campaign for Take-Off Grand Prize in 2000. The explicit aim of the city is to phase out fossil fuels entirely, an aim for which considerable changes of the transport sector will be necessary.

#### 6.4.1 SMILE

Continuing on the work towards achieving a sustainable urban and regional transport system, and spurred by the growing burden of traffic increase, Malmö launched the EU project of SMILE. SMILE – towards Sustainable Mobility for people in urban areas – was one of four CIVITAS II (City-Vitality-Sustainability) project running between the years of 2005-2009. The objectives of the CIVITAS programmes were to implement and promote clean and efficient urban transport measures in 8 integrated 'packages' of technology and policy, leading to a critical mass for markets and innovation in the field of sustainable urban mobility. The overall aim of the CIVITAS II programme was to 'combine a set of measures to develop an intelligent, sustainable and intermodal urban transport solution that makes it possible to live an active life independently of use and ownership of private cars' (EC, 2009a). CIVITAS programs are coordinated locally, following the devise of a program 'for cities, by cities'. The participant cities are compared to laboratories for learning and evaluation, with the explicit aim to spread the experiences and the knowledge that is acquired during the process to other cities, mainly in the EU. Great focus is therefore put on the evaluation process which follows templates specifically designed for transferability between both projects and cities.

The SMILE project spanned five European cities – Malmö (Sweden), Norwich (UK), Potenza (Italy), and Suceava (Romania). The partnership was originally formed by joining two separate applications by the cities of Norwich and Malmö, giving the SMILE project two 'leading cities' with shared coordinating responsibilities – Malmö, in the role as project coordinator, and Norwich, acting as evaluation and dissemination coordinators.. All in all, the SMILE project comprised 32 partners, including private businesses and municipal actors, which spent a total of over 31 million Euros spread over 51 demonstration measures (EC, 2009b). The overall aims, or objectives, of the SMILE project demonstrate great ambition, including ecological sustainability, the health and wellbeing of citizens, protection of cultural heritage, changing attitudes towards sustainable transportation, and creating a more equal transport system. This all falls under the overall objective 'to demonstrate and evaluate a modern and integrated transport system' (EC, 2009a: 9). The project objectives are categorised into four groups reflecting the implementation process – process, output, outcome, and exploitation objectives – of which the outcome objectives best mirror overall project ambitions:



- reduced emissions from vehicles
- improved air quality (not quantified in terms of location or impact)
- increase the proportion of SMILE cities covered by low emission zones
- improve the efficiency of city distribution services
- improve service quality, reliability, safety and security of public transport and wider transport system
- improved information provision
- shift the balance of fuel use away from conventional fossil fuels
- induce a modal shift from car to more sustainable passenger transport modes
- increase public awareness of the implemented measures and the environmental impacts of their transport choices

(EC, 2009a: 12)

The subsidiarity principle – a cornerstone of the EU project structure – requires public policy to be allocated to the lowest, smallest, or least centralised possible level of government. This resulted in the SMILE program being framed predominantly within the local context of Malmö, reflecting the city’s mobility patterns, concerns, and ambitions. At the same time, however, all EU projects are set within the overarching framework provided by EU program policy regulations which deeply affect the program’s design, its objectives, measures, and evaluation. The result is one of increased complexity, mirroring the divergent trends of globalisation and centralisation of decision-making on the one hand, and decentralised, fragmented decision-making on local levels on the other (Geerlings and Stead, 2003).

A second cornerstone upon which EU projects are built is the principle of policy integration which dates back to the first European Environment Action Program of 1973 (see Hey, 1997; Geerlings and Stead, 2003). It is considered a key aspect of policies for sustainable development, illustrated by the European Transport White Papers of 2001, 2006 and 2011 (EC, 2001; 2006; 2011) which clearly underline the importance of several types of ‘inter-actions’, following the devise that ‘no one intervention on its own will provide an answer to a city’s problems’ (May et al., 2003: 162). In addition to policy integration, the policy documents advocate *intermodality* (linking different transport modes) as well as *interoperability* (making different transport networks or infrastructure compatible) – both of which, as Geerlings & Stead (2003) point out, require policy integration.

Several forms of integration has been emphasised during the SMILE project, not least institutional integration stating that ‘[i]n the vast majority of cases it would be impossible for a single organisation to implement a CIVITAS measure because of cost or knowledge requirements linked to its innovative nature’ (EC, 2009b: 25). The Malmö municipality therefore cooperated with several regional actors, most prominently with the region’s public transport provider – Skånetrafiken – as many of the measures are directly or indirectly intended to increase the share of public transit journeys.

The SMILE project is modelled after a ‘Triple Helix’ principle; an extension of the public-private-partnership prototype. The Triple Helix supplements the components of public organisations and private interests with elements from universities or research institutes, arguing

that these institutions are better suited to conduct the rigorous evaluations process. Three evaluation approaches were used in the SMILE project: impact assessment, process evaluation, and cumulative effects assessment (CEA). The two interviewees for this study conducted the impact assessment which was presented as the main evaluation where all measures were assessed on an individual basis. The process evaluation played a minor role as did the cumulative effects assessment, which were conducted by researchers in the UK. The CEA, which could have been a most interesting component of the evaluation, experienced several problems along the way, including staff changes, changes in university affiliations, diffuse divisions of labour, and a lack of international cooperation, and thus ended up taking a considerably smaller role than first intended. The impact assessment was structured according to five project areas – energy, economy, environment, society, and transport system – and was comprised by three sets of data relating to the project implementation: a baseline (before situation), a business as usual scenario (had SMILE never been implemented), and an ex-post situation (after SMILE). The baseline for each measure was established using the indicators chosen for that particular measure. A business as usual scenario entailed using historic time series data, transport network modelling and comparisons to similar sites in order to estimate a likely scenario assuming that the SMILE measures had never been introduced. Finally, the ex post situation was evaluated according to the indicators chosen for each measure and assessed against the business as usual scenario in order to establish measure impact.

#### 6.4.2 Work packages & measures

All CIVITAS programmes are divided into work package which categorise measures according to aim, strategic area, or mode of transport/technology. The measures of SMILE are divided into eight such packages (numbered 5-12):

5. Energy-efficient, cost effective and clean public transport
6. Demand management strategies based upon access restrictions to the inner city and other sensitive zones
7. Demand management and revenue raising strategies based upon integrated area-wide pricing strategies
8. Stimulation of collective passenger transport and the quality of service offered to passengers
9. New forms of vehicle use and/or ownership and less car intensive lifestyles
10. New concepts for the distribution of goods
11. Innovative ‘soft’ measures for managing mobility demand
12. Integration of transport management systems and related information services

Within these packages, a total of 51 measures were implemented, 22 of which were set in Malmö (see table 6-1). As lead city, Malmö was obligated to launch measures within each of the eight work packages. The 22 measures that were launched show three major objectives: establish and support a supply of and market for biogas, create more sustainable systems for local goods distribution, and push for a modal shift, increasing the share of pedestrians, bicyclist and public transit users (EC, 2009b). The total budget for Malmö was € 8, 9 million, with a commitment from the Malmö Municipality and the participant businesses to co-finance the project at a ratio of 35-50 %.

The outcomes of the SMILE project measures are not, by themselves, relevant for this thesis as they are all evaluated separately and not as parts of an overall systemic change. In addition, they are predominately ‘micro measures’, i.e. scaled down versions which are only to be implemented fully after evaluation, should they be deemed viable. From a systems approach, therefore, the individual measures are not relevant. Rather, the analysis of the SMILE project is made from the perspective of institutional adoption of the myth of prosperity through mobility and approached through its actors rather than its measures. Next, therefore, we turn attention to the myth of prosperity through mobility, presented in section 4.3.1, in the setting of the city of Malmö and the Öresund Region.

<b>Work package</b>	<b>Measure</b>
<b>5. Energy-efficient, cost-effective and clean vehicle fleets and the necessary energy infrastructure.</b>	5.1 Clean Municipal Fleet 5.2 Biogas on the Net 5.3 Clean Heavy Vehicles 5.8 Clean Fleet UMAS
<b>6. Demand management strategies based upon access restrictions</b>	6.1 Extended Environment Zone
<b>7. Demand management and revenue raising strategies based upon integrated pricing strategies</b>	7.1 Marketing of Clean Vehicles by Subsidised Parking
<b>8. Stimulation of collective passenger transport and its quality of service.</b>	8.1 Marketing of New Bus Route 8.2 Improved Security, Safety on Buses 8.3 Integration of Cycling with Public Transport
<b>9. New forms of vehicle use and/or ownership and lifestyle.</b>	9.1 Car Sharing for Business and Private Persons
<b>10. New concepts for the distribution of goods.</b>	10.1 Freight Driver Support 10.2 Satellite Based Traffic Management for SMEs 10.7 Sustainable SME Logistics for the Food Industry
<b>11. Innovative ‘soft’ measures for managing mobility demand.</b>	11.1M Managing Mobility Needs of Private Persons 11.1S Managing Mobility Needs of Private Persons and Business 11.2 Eco-driving for Municipal Employees 11.8 Eco-driving for Hospital Employees 11.9 Heavy Eco-driving
<b>12. Telematics</b>	12.1 Use of Real Time Applications for Travellers 12.2 Traffic Monitoring and Traffic Signals 12.3 Mobile Internet Services in Connection to Bus Information 12.4 Internet Tool for Travel Planning 12.7 Bus Priority System

Table 6-1 SMILE measures

### 6.5 The Malmö mobility myth

While the very idea of physical mobility as a positive force for society is certainly not new to the region – Malmö has, for example, long directed much investment into the expansion of the regional road network (see map 6-1) – the upswing it received in the 1990s is remarkable.

Following the decline of the industrial sector and its ensuing critical juncture (Mahoney, 2000), the notion of mobility as not only a positive, but an absolutely necessary force in and for society has penetrated all elements of society. In order to establish the myth's presence in the city of Malmö and to reconnect with the theoretical approach of myth, this section depicts the myth of mobility in Malmö structured by the basic characteristics of myth presented in section 4.2; emplotment, transcendence, fear, naturalisation and, storyteller. The myth of prosperity through mobility in Malmö is further discussed in paper three, in connection with infrastructural and institutional lock-in, where a more thorough presentation of the empirical material is presented. The purpose of this section is therefore not to delve too deeply into the empirical material, but to give a short summary of the myth as presented in the developmental plans of the city of Malmö and to reconnect to the theoretical framework of myth.

### 6.5.1 Emplotment

As presented in section 4.2, the first step to establishing a myth is the act of emplotment (White, 1973). Through it, events are given chronological order – A before B before C – which constitutes the start of a naturalisation process. Without it, interconnection between events, or actions, cannot be established. There would, in other words, be no story.

The sequence of events in the myth of mobility is simple, but crucial: increased mobility (A) before economic development (B). A third step is sometimes added – societal wellbeing including social and ecological sustainability (C) – as a result of or as conditioned by economic development. While events or actions may be seen as mutually beneficial, there can be no real doubt as to where the chain really begins, at least from the perspective of city development and planning; mobility needs to be increased and improved in order to achieve economic growth.

As member of the European Union, Sweden's regional and local planning is mandated to reflect strategic EU guidance and transport is one of the issues in which policy EU is most engaged. The guiding documents for the development of transport – the so called 'White Papers' (EC, 1992; 2001; 2006; 2011) – are recurrent references in Malmö's regional planning documents. The link between transport growth and economic growth is made increasingly clear throughout these documents. In the 1992 White Paper, the link is established repeatedly, yet still lacks chronological clarity (what leads to what) with assertions mostly focusing on correlation: 'In general, transport demand for both goods and passengers, runs in parallel to growth in GDP' (EC, 1992: 6). In the 2001 update, the frequency of transport-economic growth references increase and refine:

It is difficult to conceive of vigorous economic growth which can create jobs and wealth without an efficient transport system that allows full advantage to be taken of the internal market and globalised trade.

(EC, 2001: 8)

The chronological order, however, is still somewhat blurred with statements such as 'economic growth will almost automatically generate greater needs for mobility' (EC, 2001: 10), i.e.

economic growth leading to transport growth as well as vice versa. The 2006 mid-term review of the 2001 White Paper shows a far more consistent chronology as well as more outspoken assertions, stating that '[e]ffective transportation systems are essential to Europe's prosperity' (EC, 2006: 3) and transport is 'a major contributor to growth' (EC, 2006: 8). The most distinct emplotment, however, is found in the 2011 White Paper, where not only the link, but also the chronology is unremittingly asserted. Establishing the plot in the very first paragraph of the document, it asserts that '[t]ransport enables economic growth' (EC, 2011: 3). The 2011 White Paper also shows a protracted timescale as not only past economic achievements are attributed to transport growth – as in the 1992 White Paper – or even current – as was more commonly seen in the 2001 and 2006 versions – but also future success:

The future prosperity of our continent will depend on the ability of all of its regions to remain fully and competitively integrated in the world economy. Efficient transport is vital in making this happen.  
(EC, 2011: 3)

A similar emplotment development can be found in the local and regional strategic planning documents of the Malmö Municipality; from a basic link between increased mobility levels and economic growth to a chronological order where the first leads to the latter (Malmö Stad, 2001; 2005a; 2013). The opposite connection is also often made, i.e. increased prosperity leads to increased traffic volumes, yet a vital difference in the two plots can be found. The emplotment where mobility (A) leads to economic growth (B) is portrayed as a positive and necessary development and a pillar of society. In the opposite emplotment, where economic growth (A) leads to increased mobility (B), mobility is almost exclusively termed 'traffic' and is treated as synonymous to car traffic, not public transit or any of the 'sustainable' modes of travel, and is considered a side-effect. Mobility, then, is a positive and vital force in society and leads to economic growth – a positive trend – whereas (car) traffic as a result of economic growth is considered an outcome of a positive economic trend with possibly negative impacts if not addressed properly.

The most notable role in the emplotment of the mobility myth in Malmö is played by increased regional cooperation; the Öresund Region. The full, or at least fuller, engagement with this cross-border cooperation has brought with it as well as been driven by the emplotment of mobility leading to economic growth. In the 2000 Malmö Comprehensive Development Plan, the importance of the new region is established:

Malmö's central location in the new Öresund Region is vital. The integration of the region is expected to bring synergy effects in the form of increased economic growth and the central location of Malmö combined with good access to land at reasonable prices are excellent prerequisites for Malmö once again having a strong and vibrant economy.  
(Malmö Stad, 2001: 19)

The very basis of this cooperation is mobility, presenting Malmö as a central ‘node’ or ‘hub’ (Gehl Architects - Urban Quality Consultants, 2010; Region Skåne, 2010) from and through which regional mobility flows.

### 6.5.2 Transcendence

Change over time is crucial, specifically change for the better i.e. transcendence. The ultimate goal is always perfection, in societal terms often referred to as *utopia* (Ricour, 1986). The end goal does not need to be clearly defined or, even less so, fully achievable, but there needs to be some kind of conception or vision of the desired outcome. It is this vision, contrasted by an inferior or even ruinous alternative, that drives adherents of the myth to action or possibly, if you’re already on the right path, non-action.

The vision of utopia in the Malmö strategic development documents centre on social inclusion, ecological sustainability, and economic growth through regional cooperation and mobility. In the introductory section of the 2013 Malmö Comprehensive Development Plan, this utopia is fully articulated in a vision of Malmö 20 years in the future:

Malmö 2032 is even closer to the continent, a given part of continental Europe. The permanent link across Fehmarn Belt and the high speed trains that run through central Malmö and Kastrup to Hamburg have further expanded the region. Kastrup Airport has reached increased international importance. The Öresund Metro between Malmö and Copenhagen is almost realised. The cooperation between the two cities has led many to consider them as one and the same city.

(Malmö Stad, 2013: 8)

Similar visions are presented already in the 2001 Malmö Comprehensive Development Plan, images which rely heavily on the Öresund regional cooperation and infrastructural developments supporting cross-regional mobility, and stating that ‘[w]ith the permanent link across the Öresund strait preconditions for the development of a dynamic Öresund Region are created. It will be a Nordic power centre, a metropole, where Copenhagen and Malmö form the core’ (Malmö Stad, 2001: 40). Similarly, the Malmö Traffic Strategy of 2004 presents ‘a stronger region’ as one of its three overriding aims (along with ‘a safe and accessible city’ and ‘more efficient transports’) (Malmö Stad, 2005b), an aim that is reaffirmed by both the 2001 Malmö Comprehensive Development Plan (Malmö Stad, 2001) and the 2013 Malmö Comprehensive Development Plan proposal (Malmö Stad, 2013). The aim involves creating a long term transport structure that draws benefit from and continues the development of infrastructural transport construction such as the Öresund Bridge and the City tunnel, strengthening Malmö’s role as a regional centre (Malmö Stad, 2004).

### 6.5.3 Fear of alternative

Fear plays a double role in myth. First, fear helps identify the enemy, what will happen if we do not heed the sense morale of the myth. By so doing, the myth also provides the solution or the way out, defined as the opposite route. The two antipodes of 'good' and 'bad' constitute Malinowski's 'psychological factor' (Malinowski, 1954) which helps us cope with fear by introducing a safe alternative. As such, myths are Manichean in their design, providing us with simplified versions of good and bad paths where one automatically excludes the other.

The opposite of a mobile, and therefore economically prosperous, society would be an immobile and therefore economically disfavoured one. Positive mobility terms such as 'flow', 'flexibility', 'progress', or 'moving forward' are contrasted by negative terms such as 'stagnancy', 'inertia', 'congestion', 'stuck' or 'standing still'.

The EU strategic documents clearly mark the alternative to a physically mobile and flowing region as detrimental to economic development as this would impede the creation of a single market, inhibit the establishment of new and competitive businesses, and disable an integrated work market. The 1993 White Paper on growth states that transport networks are 'the arteries of the single market' (EC, 1993: 89), without which the system would clog up or, continuing the analogy, lead to a complete cardiac arrest. The 2001 White Paper on transport similarly asserts that congestion and poor transport flow now pose a serious risks for reducing economic growth and competitiveness (EC, 2001), while the 2011 version concludes that because of its fundamental role in economic development '[c]urbing mobility is not an option' (EC, 2011: 5).

In the Malmö General Plans of 2001 (Malmö Stad, 2001) and 2013 (Malmö Stad, 2013), a less mobile region is simply not addressed as an option. A well-developed transport infrastructure is portrayed as vital for regional integration and the subsequent economic growth; mobility is non-negotiable as a continuously developing region requires a continuously developing transport system. Transport nourishes the city, without it the city would starve.

Concerns about the certain-to-come consequences of not continuing or preferably increasing, mobility development is made even more explicit in both local and national media, warning that insufficient infrastructural development will hinder regional progress (Håkansson et al., 2012) and that the greatest challenge for the development of the Öresund Region is capacity restrictions on both road and rail (Storm Rasmussen and Swanstein, 2008).

### 6.5.4 Naturalisation & storytellers

With a clear emplotment, a vision of utopia, and a fear of the alternative dystopia, the structure of the myth is in place. Lacking is the power drawn from the common sense element or the 'taken-for-grantedness' of myth. For this, repetition is vital. The myth needs to be reiterated and presented as a commonly known fact, rather than as a personal or political statement or a proposition. Repetition of the myth can be done through several mediums or forms; verbally, in print, in pictures etc., yet regardless of medium every myth requires a storyteller. These narrators will depict, and most often also believe in, the validity of the myth to the point where disputing it



is not to challenge the storyteller, but to risk exposing yourself as uninformed or even ignorant or to identify you as a non-member of a group which forms part of its identity around the myth.

There's a strong argument to be made for the claim that the myth of prosperity through mobility has indeed achieved the privileged position of common sense in the city of Malmö, by way of two interrelated processes or indications. First, the frequency by which the myth is repeated across a wide spread of mediums – strategic municipal documents, newspaper articles, local and regional mobility campaigns with slogans such as 'live here, work there' (live in Malmö, work in Copenhagen), plans for future developments of businesses, higher education and work, etc. – has led to both a familiarisation of the myth and has helped the myth to penetrate or permeate social thought. Second, a presentation of the myth as a well-known fact has, over time, led to a deflection of critical consideration, i.e. the myth is presented as fact, not belief. It has become what Barthes would call 'de-politicised' (Barthes, 1972). The centrality of mobility, alternatively termed transport or accessibility, is stated in the form of assertions e.g. '[t]he development of the public transit has been key to regional growth' (Trafikverket, 2013: 136); 'A first rate public transit creates growth in itself' (Malmö Stad, 2008: 23); '[t]he entire social machinery is composed around transports' (Malmö Stad, 2001: 224); and '[p]lanning for an additional permanent link across the Öresound is vital in order to ensure the long-term development opportunities of the region' (Malmö Stad, 2013: 18). The juxtaposing alternative – the dystopia – is equally clearly stated, e.g. '[n]o traffic, no city' (Malmö Stad, 2004: 20); 'inadequate infrastructure hinders the development of the region' (Håkansson et al., 2012); and '[i]f an international metropolitan region like the Öresund Region is to survive global competition, mobility must work' (Storm Rasmussen and Swanstein, 2008).

The storytellers are many and varied: politicians, journalists, municipal strategists, think tanks, business representatives, and, of course, the general populace. In this case-study, focus lies on municipal employees with direct responsibility for local and regional mobility issues. Their acceptance of and references to the myth as well as the influence it may hold over their everyday work will be presented later on in this kappa as well as in paper three.

In the sections to follow, which present and summarise the case-study, it is references to this myth and its elements that have been of prime interest and the consequences it may have for a lock-in of a high and rising mobility system in the city of Malmö and the Öresund Region. Two kinds of lock-ins have been identified which both draw strength from and find legitimacy in the myth of prosperity through mobility; infrastructural and institutional lock-in. These are presented and described more thoroughly in paper three and will here only be summarised as a basis for the overall discussion later on as well as for the section presenting suggestions for further research which concludes this thesis.

## 7 Main results & discussion

### 7.1 Introduction

The aim of this thesis has been twofold; to argue for the use of the concept of myth in human geographical research, and to employ the concept by exploring its role in the lock-in of a system of high mobility. This section presents the main findings of both the theoretical exploration and the empirical analysis, which correspond with the included papers.

### 7.2 Myth as geography

The use of the concept of myth in geographical research is discussed in paper one and, although less extensively, paper two.

While human geography has long offered a lively venue for issues of place-perception – starting with Wright’s history of geographical ideas (Wright, 1925b; 1925a; 1926) or *geosophy* (Wright, 1947) – there is still much room for a theoretical as well as an empirical engagement with the concept of myth. Myth is not an unfamiliar concept within geographical research, having been approached through the related concept of metaphor (Livingstone and Harrison, 1980; 1981; Mills, 1982b; Kunze, 1983b; 2009), by means of the notion of the ‘taken-for-granted’ (Olsson, 1974; 1991), or even directly as spatial routines or ‘place-myths’ (Shields, 1991). Nor are myth theorists absent from geographical research, most prominently represented by Cassirer, (e.g. Livingstone and Harrison, 1981; Entrikin, 1977), Eliade (e.g. Claval, 2001) and Barthes (e.g. Duncan and Duncan, 1992). Nevertheless, the use of the concept of myth within human geographical research is not without concern. Paper one presents three conceptual pitfalls which many geographical uses of myth tend to fall into: eranisation or historisation, formalisation, and conceptual presumption. Eranisation/historisation renders myth irrelevant for contemporary research by ascribing it to a lost era of man (e.g. Mills, 1982b; Kunze, 1983b; Olsson, 1991; Claval, 2001) alternatively studying myth exclusively in an historical setting (e.g. Wright, 1925b; Harvey, 1979; Cosgrove, 1982; Buttimer, 1993; Lewis and Wigen, 1997). Formalisation reifies myth and thus removes it from the realm of everyday practice (Livingstone and Harrison, 1981; Olsson, 1991). Conceptual presumption, lastly, entails the use of myth without definition, yet with an implicit and specific conceptual understanding, most commonly as a misconception or an outright lie (e.g. Lawson and Stockton, 1981; Fellmann, 1986; Dixon and Drakakis-Smith, 1995; Pain, 2006). With unexplored or occasionally muddled uses of the concept of myth, the field of human geography has much to gain from an elaborated employment of a concept which directly and explicitly involves the fundamental issue of perception-place connections.

Paper one continues by presenting myth as an emplotted story (White, 1973) which contextualises and rationalises beliefs (Overing, 1997; Schöpflin and Hosking, 1997; Hall, 2006) and alleviates anxiety (Malinowski, 1954). It is grounded in belief and neologism (Barthes, 1972) rather than facts, rendering truth irrelevant (Bruner, 1960; Schöpflin and Hosking, 1997; Hall,

2006). Its impact relies entirely on its ability to naturalise belief, turning history into facts (Barthes, 1972) or common sense (Hall, 2006) as well as on its capacity to inspire fear of alternative routes, practices, and beliefs (Cassirer, 1946a; Malinowski, 1954; Hall, 2006). The storyteller is central as myths gain recognition through reiteration (Barthes, 1972; Kearney, 2002), a statement which emphasises the actor as much as social structures.

Defined and understood as such, myth may be a useful conceptual tool for a plethora of issues within contemporary human geographical research; including the central importance of language (Tuan, 1991; Merriman et al., 2008; Thomas et al., 2011) and storytellers (Van Eeten and Roe, 2000; Bailey and Bryson, 2006); everyday and taken-for-granted practice (Bailey and Bryson, 2006; Merriman et al., 2008); and, the issue on which this thesis centres, the mystery of obduracy or inertia (Merriman et al., 2008). Drawing on works by Rose and Wylie (Rose and Wylie, 2006; Wylie, 2006; 2007), the concept of myth, then, may be a truly useful concept in developing the notion of landscape as a topographic idea, further exploring the intricate and fundamental interaction of place and perception. These possible venues for further research will be discussed more in section 8.

In paper two (Essebo and Baeten, 2012), the concept of myth is further explored as well as somewhat applied to an issue which has come to hold a central place in research across disciplines, including human geographic research: sustainable mobility. In this paper, structured as a discussion piece, we argue that the characteristics of myth – most notably its naturalising effect as well as its ability to create its own internal logic or rationality – enables it to merge two seemingly contradictory notions, i.e. development defined as quantitative growth and environmental sustainability. The myth of prosperity through mobility is introduced, which states that mobility growth is a path leading to economic progress, a correlation or rather a causation which has long been taken for granted (Banister et al., 2000; Black, 2001; Stead and Banister, 2002; Chapman, 2007). Notions of progress through mobility growth is contrasted by the fear of stagnation or recession should mobility developments be halted or capped, making the alternative of non-mobility growth unviable. While not using the concept of lock-in explicitly, the paper touches upon its processes, stating that a system of continued mobility growth is legitimised through the concept of sustainability which, through neologism (Barthes, 1972), loses its limiting features and transforms into an enabling concept through which continued growth – green growth – is naturalised.

## 7.1 Myth in lock-in

In exploring the geographical potentials of the concept of myth, this thesis applies it on an issue, or rather a process, which has not only been of prime concern within socio-technical research (Hughes, 1987; Bijker et al., 1987; Arthur, 1989; 1994; Meadows, 2009) and historical sociology (Tilly, 1988; 1994; Griffin, 1993; Mahoney, 2000), but that is also increasingly noted within human geographical studies (Merriman et al., 2008), i.e. lock-in.

Concern for the negative side-effects of mobility has led to great academic, as well as practical, interest in processes of transition, increasingly often acknowledging the systemic elements of mobility (Dupuy, 1999; Unruh, 2000; 2002; 2006; Featherstone, 2004; Urry, 2004; 2008). Yet

these are often addressed from perspectives of imminent change, most notably by Kingsley and Urry (2009), disregarding or not fully appreciating the qualities of inertia associated with system processes (Unruh, 2000). It also limits the scope by overly focusing on the particular transport mode of the car (e.g. Dupuy, 1999; Miller, 2001; Edensor, 2004; Gartman, 2004; Urry, 2004; 2008; Kingsley and Urry, 2009; Merriman, 2009; Sperling and Gordon, 2009) even though other modes of transport are equally susceptible to system inertia. This thesis has, therefore, approached the issue of mobility transition from the perspective of non-change or system obduracy by applying the concept of myth to the lock-in of high mobility systems.

The city of Malmö in the Öresund Region – spanning southern Sweden and eastern Denmark – has gone through a fundamental transition following the critical juncture (Mahoney, 2000) brought on by the collapse of the city's extensive industrial sector in the 1980s and 1990s when it refocused on a strategy of regional enlargement based on high and flexible mobility. The myth of prosperity through mobility, discussed in paper two and further analysed in paper three, has acted as rationale for this strategic shift and thus aided a systemic lock-in of a high and expanding mobility system. Two types of lock-in, which support and further cement one another, has been identified through the case-study analysis: infrastructural and institutional.

### 7.1.1 Infrastructural lock-in

Paper three addresses the role of myth in infrastructural and institutional lock-in, concluding that the myth of prosperity through mobility has played a pivotal role in the continued lock-in of a high mobility system in the city of Malmö.

By guiding and naturalising practice, myths influence materiality (Schöpflin and Hosking, 1997; Hall, 2006). The physical structures which are legitimised by societal acceptance and expectation persist over time (Hughes, 1987), creating a material or infrastructural lock-in. Arguably the most tangible form of mobility lock-in, infrastructural lock-in enables or disables mobility practice across time and space. The durability of infrastructural lock-in is relatively high as physical structures – roads, bridges, tunnels, tracks – not only last for centuries, but sediment habits that may last far longer (Unruh, 2000). As enactments of everyday choices guided by naturalised beliefs of good and bad courses of action, physical developments preserve societal beliefs over time (Hughes, 1987).

As a long-term and non-tradable – or 'sticky' (Ghemawat, 1991) – investment, infrastructural development holds a strong temporal component which requires grounded justification, i.e. presented and perceived of as valuable over time. Changes to the system or a redirection of the overall aim would not only be highly costly, but would also deem previous expenditure wasted (Vergragt and Brown, 2006), further creating incentive to maintain rather than change or substitute current structures. The role of myth in infrastructural lock-in is to guide, rationalise and legitimise chosen infrastructural developments – or non-developments – by presenting them as the seemingly naturally superior – or the 'right' – option out of several available.

The city of Malmö has launched several big infrastructural developments over the past two decades, aimed at creating increased local, regional, and global mobility and the economic growth said to follow. Justification for infrastructural developments has relied increasingly on the myth

of prosperity through mobility since the mid-1990s and the construction of the first major mobility infrastructure – the Öresund Bridge – expected to turn the Öresund Region and Malmö in particular into a northern European growth centre (Ekonomigruppen. et al., 1996). By continuously and increasingly emphasising the bridge’s importance for regional and urban development – defined as economic, quantitative growth – its significance for regional development has reached a taken-for-granted status in municipal strategic documents (Malmö Stad, 2001; 2013). Conversely, had the bridge never been built it would, it is asserted, it would have resulted in traceable losses of revenue.<sup>5</sup>

Most interestingly, the case of the Öresund Bridge showed a fascinating feature of the myth of prosperity through mobility and its role in lock-in: lock-in was, itself, defined as a mark of success and a rationale for further infrastructural lock-in. In 2005, bridge patronage rose to a point where capacity could no longer meet demand. Rather than regarding this development as symptomatic of the limitations of mobility growth, it was taken as confirmation of the soundness of the original strategy in line with notions of positive feedback (Wiener, 1961) or increasing returns (Arthur, 1994) and enabled the rejection of alternative paths (Dosi, 1982; Freeman and Perez, 1988).

Following the ‘success’ of the Öresund Bridge and subsequent needs for increased infrastructural capacity, the myth of prosperity through mobility grew even stronger in its role of naturalising infrastructural investments. Next, it was used to justify the development of the City Tunnel; a railway link of 17 kilometres, 6 of which run under the central parts of Malmö, finalised in December of 2010. The link required a complete remodelling of Malmö central station, from a terminus station to a thoroughfare, and was fitted with two new stations in central Malmö and towards the Öresund Bridge for easier access to trans-sound mobility. The Öresund Bridge, which has been termed ‘the heart’ of the regional transport system, was described as being supplemented with a ‘backbone’ (Malmö Stad, 2001, Malmö Stad, 2005b). Regional growth and expansion through mobility is increasingly often and strongly emphasised, using concepts of nodes, hubs, and growth centres (Malmö Stad, 2001; 2005a; Gehl Architects - Urban Quality Consultants, 2010; Region Skåne, 2012).

Mobility spurs mobility and, defined as a positive lock-in, is further augmented by the myth identifying the development as not only positive, but necessary. As mobility limits become increasingly manifested, due to patronage rising faster than infrastructural capacity, the element of fear (Malinowski, 1954; Hall, 2006) strengthened. The locked-in system requires escalation, the lack of which spurs considerable concern. The development of a third infrastructural project, connecting the Danish island of Lolland with the German island of Fehmarn – the Fehmarn Belt link – will put further strain on existing infrastructure as the Öresund Region becomes connected with Slesvig-Holstein, Mecklenburg-Vorpommern and Hamburg; a region with a grand total population of almost 10 million people. In addressing the increased demands of rising regional mobility, and an enlarged region, voices speak out for a second link across the Öresund, connecting the cities of Helsingborg (Sweden) and Helsingör (Denmark) north of the existing Öresund Bridge. Neglecting to build such a link would, it is asserted, inhibit regional growth and

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<sup>5</sup> Several estimations of revenue losses have been made, e.g. by IBU Öresund who estimate that had the bridge not been built it would have led to revenue losses of DKK 11.5 billion (approx. €1.5 billion using a 10 year average) in its first ten years of (non)operation and approximately DKK 2 billion (approx. €270 million using a 10 year average) annually in the years to follow (IBU-Öresund, 2010).

economic development (Malmö Stad, 2013), as insufficient capacity is one of the by far biggest risks and therefore challenges of the continued development and prosperity of the Öresund Region and the city of Malmö (IBU-Öresund, 2011; Region Skåne, 2012; Trafikverket, 2013).

### 7.1.2 Institutional lock-in

Paper three also addresses the concept of institutional lock-in; a system of interlinked actors which create a self-referential system that increases in value as additional actors join and the system sediments (Unruh, 2000). Through organisational learning processes, historical framing, and routinisation of management which create ‘rules of thumb’ (Grubler, 1990), the system creates and continuously strengthens institutional lock-in (North, 1990). Mobility lock-in being a wicked problem, negative feedbacks – failing policy practice – do not discourage continued commitment as there are no clear criteria against which to measure success and as the very problem definition can be altered to fit whichever solution aligns best with ruling institutional practice (Rittel and Webber, 1973). The messiness of a wicked problem – being elusive, continuous, conditioning, open-ended, unique, symptomatic, and inherently Manichean – requires the directionality, contextualisation, and, most of all, naturalisation of myth which can then be conveyed by its managers, or storytellers.

This thesis has analysed the potential role of the myth of prosperity through mobility in institutional lock-in through the case of SMILE; an EU funded program launched by the city of Malmö with the aim of finding measures which lead to sustainable urban mobility. As elaborated in paper three, interviews with administrators, managers, and evaluators of the project as well as with representatives of the regional transit company which was involved in all measures concerning public transit, showed a clear presence of the myth. The analysis traced the influence of the myth of prosperity through mobility and the rejection of alternatives through the three strategies of repelling (openly rejecting), decoupling (officially endorsing, but rejecting in practice), and encapsulating (exiling alternative solutions and/or actors to a small and isolated unit) which are used to maintain discursive coordination (Sørensen and Longva, 2011). The two former of these strategies – rejection and decoupling – were used in various degrees by all involved actors and acknowledged by those who considered themselves not to employ them themselves. All municipal interviewees affirmed the importance of high and increased mobility for regional and urban development and economic growth, rejecting the alternative of limited or reduced mobility as this would lead to regional stagnation. An interesting exception to myth acceptance or accreditation was the representatives of the public transit company who stated that mobility was not an aim of itself. This ‘attitude’, as it was referred to by one of the municipal employees, was however not endorsed or appreciated by other regional actors, such as the Regional Council and the traffic Department. A municipal interviewee referred to a suggested mobility cap, presented by the public transit company, as a ridiculous notion or even a joke.

The strategy of decoupling was found in a discrepancy, conscious or unconscious, between official project aims of working ‘against the macro level business as usual trend’ (EC, 2009a: xi) by ‘reducing the interdependence of economic growth on the growth of car use and traffic’ (EC, 2009a: 9) and to ask ‘the inevitable question of whether the transport is necessary at all’ (EC,

2009b: 4) and the clear rejection shown by the interviewees of any such goals. Any radical change to the system was discarded on behalf of conservative options which were better aligned with current institutional practice. As summarised by one of the representatives of the public transit company who, once again, offered an alternative but rejected view, the problem is connected to paradigmatic notions of societal development which discard alternate routes, stating that 'In reality, we know how to build a society with less mobility and still maintain growth, but it's so politically sensitive'. The strategy of decoupling was employed through temporal avoidance, i.e. a few of the interviewees claimed to support more radical change, but asserted that no such change can be made without a generational shift: out-with-the-old, in-with-the-new. While the sincerity of the interviewees' desire to accomplish radical change cannot be put in question, phasing out old practice through generational replacement is not as clear-cut a strategy as it may seem. Knowledge reproduction – passing on, often informal or implicit, policy practice – to new system member preserves existing practice across generational shifts, thus further cements rather than breaks system lock-in (Unruh, 2000). Decoupling was also seen in the practical work of the SMILE project where measures were limited or downgraded so as not to create disturbances for traffic flow, e.g. a priority system for bicycles that was switched off during peak hours so as not to disturb car traffic.

The strategy of encapsulation – confining actors or practices which may lead to radical system change to an isolated unit – shows potential signs of being used, yet its use cannot be conclusively asserted within the framework of this thesis. Several interviewees referred to a newly formed unit within the municipal organisation – the Traffic Environment Unit – which was established largely as a result of the work initiated by the SMILE project and the sole purpose of which is to address issues of sustainable urban mobility. However, as this study has been confined to the SMILE project, there has been no opportunity to expand the scope – mainly the time scope – to include actions which stretch past the project, including the newly formed unit. It can be hypothesised, however, that potential system change qualities of the new unit will depend largely on its capacity to break away from established norms – or rules of thumb – as well as to implement new routines and practices which go beyond the unit itself.

Institutional lock-in, then, can be identified within the SMILE project, a lock-in that was, insistently, justified by the interviewees through the myth of prosperity through mobility. The limiting framework set by aspirations of continued mobility growth is established throughout the interviews as well as in the official documents preceding and resulting from the project, stating that:

Regarding transport, the City [of Malmö] aimed to plan initiatives and improvements in the context of the growth of the Öresund region, considering Malmö as the main access point to Sweden and the Nordic countries from the rest of Europe.

(EC, 2009a: 369)

### 7.1.3 Shift, not limit

As limiting or capping mobility is not regarded as viable options, fearing that any such measures would hinder regional development and economic growth, the achievement of creating a sustainable mobility transition relies entirely on problem definition and aims which align with ambitions of continued mobility growth. As a wicked problem, mobility lock-in is defined to a large extent by its preferred solution (Meadows, 2009). The solution in the case of Malmö is one of mobility shift, i.e. redirect transport users from ‘unsustainable’ to ‘sustainable’ modes of transport. The unsustainable mode is identified as the car – the transport mode most often referred to in strategic documents as well as in the interviews when discussing ‘traffic’, ‘congestion’, or ‘limits’ – whereas sustainable modes include train, buses, bicycles, and feet – which are connected to terms such as ‘accessibility’, ‘flow’, ‘expansion’, ‘progress’ and ‘regional enlargement’. The problem, then, is defined as the lock-in of one particular mode of transport – the car – rather than the systemic lock-in of high and rising mobility and its supporting infrastructural and institutional frameworks.

Looking ‘beyond’ the era of the car, yet locked into a system where the role of governmental administration is to cater for public expectations of high speed and access (Hull, 2008), ‘mobility’ (possibly unsustainable) becomes ‘accessibility’ (sustainable and necessary). The targeting of the car while maintaining regional flow is a repeated aim throughout strategic documents concerning both regional and local mobility, stating that the aim is to find viable options to the car which will allow for maintained and increased levels of mobility (Malmö Stad, 2001; 2013). The strategy goes in line with overarching or transnational goals of increased mobility and global flow, e.g. as stated by the OECD in that ‘[t]he main idea is not to curb mobility, but to rely less on light-duty vehicles to produce it, as well as switching massively to low-carbon technologies’ (OECD, 2012: 50). Rather than restricting mobility, flow is to be created by removing ‘seams’ between different modes of sustainable transport modes that hinder their use or cause discomfort for their users. This notion is mirrored in Malmö’s municipal transport strategies, as illustrated by figure 7-1.



Figure 7-1 Seamless sustainable transport, (Malmö Stad, 2012: 27)



Certainly, the definition of the wicked problem of mobility lock-in and its solutions is in this case dependent on definitions of sustainability. This is further discussed in the section presenting venues for future research, yet a few remarks are worth making here which connect to the analysis of the contradictory nature of myth discussed in paper two.

The project of SMILE (as presented in the extensive material composed of project application, evaluations, and post-project reports) does not include a definition or discussion of the very term sustainable mobility, but rather relies on societal pre-notions as well as the personal knowledge of involved practitioners. While silence speaks volumes for academic analysis, practitioners are nevertheless left to rely on presumptions and quiet understanding.

Turning to the practitioners for clarification and localised conceptual understanding and use, all interviewees were asked what sustainability, and more specifically sustainable mobility, was to them and how the concept had been conceptualised, used, or discussed in the project. The question repeatedly evoked initial reactions of slight confusion and discomfort. Several interviewees referred to the ‘common sense’ latent in the concept, e.g. a project administrator who stated that ‘[i]t’s felt so self-evident that it hasn’t required a definition’. Repeatability was a recurrent theme, with the notion that anything that depletes natural resources over time cannot be considered sustainable, to which one administrator added that ‘[i]n that sense hardly anything [in the project] has been sustainable, but it’s a step in the right direction’. The same administrator preferred the term ‘accessibility’ to ‘mobility’, stating that:

Sustainable accessibility is the kind of accessibility where your accessibility to an activity or whatever it is doesn’t limit someone else’s accessibility. Almost a kind of liberal freedom notion.

Links to economic and social dimensions of sustainability were made by several interviewees, as here by an administrator who mapped their relationship:

Ecologic sustainability is the framework, we can’t exceed it because then we destroy the earth and the preconditions for life. And economic sustainability is kind of the lubricant, so that we can reach the target which is social sustainability.

The notion, or strategy, of a mobility shift has been central to the definition of sustainable mobility, as illustrated by the number of SMILE measures directed at increasing public transit (table 6-1). Sustainable modes of transport have been, mostly through quiet understanding and unspoken presumptions, identified as public transit, bicycle, feet, and vehicles (including cars) run on ‘green’ fuels such as ethanol and electricity.

The impact of the shift strategy on the continued lock-in of a high mobility system cannot be denied. In terms of a mobility shift, the SMILE project is considered a success. Travel surveys conducted before (2003) and towards the end of (2008) SMILE show a reduction of car trip share of 11 % (Malmö Stad, 2009), a result often referred to by the SMILE interviewees. Oddly, the same survey showed the share of bus trips reduced by 1 % during the same time period, a slightly surprising result considering that many of the measures targeted public transit increase. In comparison, the public transit company’s own statistics from the same time period shows an

increase of the number of bus trips of 21 %. The apparent discrepancy lies in the unit of measurement, one measuring the *share* of trips while the other measures the *number* of trips. Still, for an increase of 21 % in the number of bus trips to show up as a 1 % reduction in the share of all trips, the overall increase of all trips must be significant. This interpretation is supported by the fact that while the share of car trips has gone down vis-à-vis other modes of transport, the number of cars on the road, as recorded by the municipality's on sight counting controls, has remained the same and in some areas increased. Results are, in other words, that car traffic is holding steady or increasing slightly while all other modes of transport are increasing. Whether the statistical unit of measurement is chosen as a conscious strategy to mask traffic development or not is impossible to say. What can be asserted, however, is that the same unit of measurement is used throughout the municipal strategic documents, starting with the General Comprehensive Plan of 2000 (Malmö Stad, 2001). What can also be asserted that the first draft of the plan specifically targeted overall car reduction, stating that, 'the aim of the city is to reduce car traffic in the city centre' which was subsequently changed to 'the aim of the city is to reduce the *share* of car traffic in the city centre' for the final and published version (Malmö Stad, 2001, italics added). The aim of a car share reduction is kept consistent in the updated comprehensive plan of 2013 (Malmö Stad, 2013). Again, being a wicked problem, the issue of mobility lock-in is defined by its preferred solution – mobility shift – rather than by the problem of systemic lock-in itself, verifying the correctness of the chosen strategy while rejecting strategies or solutions which are not aligned with overarching goals (Dosi, 1982; Freeman and Perez, 1988). In addition, as there are no right solutions to a wicked problem, any discrepancy between desired outcome and actual outcome can find explanation in intervening processes (other factors interceded) or insufficient application of the preferred solution (we didn't do it enough) (Meadows, 2009). There is, for example, no way of proving that had the SMILE measures, and similar actions, not been implemented the car traffic – in both relative and absolute terms – would have increased or, similarly, that external factors such as fluctuating work markets or house pricing didn't restrict the impact of otherwise sound strategies.

A mobility shift enables the myth of prosperity through mobility to maintain its discursive monopoly while disregarding more general and widely applicable issues and consequences of overall mobility lock-in. In so doing, transport policy need not address transport as such, but rather its externalities or the 'side effects of otherwise useful economic transactions' (Boarnet, 2010: 587).

## 8 Future research

### 8.1 Introduction

With the aim to both continuing on paths started on in this thesis as well as finding new ones, this penultimate section offers three possible venues for future research which correspond with the research presented in the three papers: change through counter-myth (a continuation of paper one and two), further exploration of sustainability as a counter-myth (a continuation of paper two and three), and further use and development of the concept of myth in geographical research (a continuation of paper one).

### 8.2 Counter-myth

Because we cherish the past as a collective guide to behavior, the general consensus  
alters very slowly.  
(Lowenthal, 1961: 245)

This thesis has directed attention exclusively towards those elements of myth which aid processes of non-change, inertia and, ultimately, lock-in. As with all lock-in research, there is risk of depicting development as deterministic, exclusively a subject to path-dependent progress or stasis. Yet myths, like system, do change. Through re-interpretation, re-invention, redundancy, even death, myths transform and are transformed to better reflect and guide societal ideals and processes. The first of the three venues for future research, therefore, addresses the transformative qualities of myth and the concept of *counter-myth*.

Change through and of myth may be one of the least explored issues within myth theory research, as myth is often noted for its ability to uphold rather than overturn ruling hegemonies (Barthes, 1972; Schöpflin and Hosking, 1997; Tismaneanu, 1998b). Quite contrary to general notions and uses of the concept of myth – where the myth supposedly ceases to be the moment it is called out and exposed as its true or, rather, false self – it can indeed be remarkably resilient. As myth draws power from belief (Schöpflin and Hosking, 1997) rather than truth (Overing, 1997; Hall, 2006), it cannot be disputed by counter-factual arguments, a stratagem rendered even less efficient when addressing wicked problems as these constantly develop or reform based on perspective, definition, and preferred solution. Additionally, myths can merge opposing ‘logics’ – as discussed in paper two – by emplotting them into the same myth, e.g. the myth of the Golden Age which merges the opposing notions of an ideal state of yore, associated with the rule of Kronos, and the metal gold; a substance which was, at that time, seen as one of the causes of degeneration (Baldry, 1952). As myth does not need to be internally logical and cannot be refuted by logical arguments or syllogisms (Cassirer, 1946b), any (intentional) alteration of myth or through myth would therefore be dependent on terms set by the myth itself.

Barthes (1972) discusses – unfortunately only briefly – the notion of counter-myths, which contests existing myths by proffering beliefs which contradict those of the ‘original’ myth. As one of the very few to address the idea of actively engaging in changing myth, Barthes states that ‘the best weapon against myth is perhaps to mythify it in its turn and to produce an *artificial myth*’, concluding that ‘[s]ince myth robs language of something, why not rob myth?’ (Barthes, 1972: 135). Barthes does not elaborate, however, on the specifics of how to do so. Myths, all myths, are artificially created in the sense that they would not exist without active, albeit not necessarily fully intentional, engagement. Counter-myth, therefore, cannot differ from an ‘original’ myth (so called solely for the sake of clarity) in neither creation nor form and function. Furthermore, the original myth does not necessarily pre-date the counter-myth as many myths are reused rather than invented which makes asserting chronological order a messy, confusing, and highly debatable task. The essence of the counter-myth, then, can only be found in its divergent, or conflicting, naturalised belief which is incompatible with that of the original myth, thereby challenging it. Lacking any further specification on behalf of Barthes, the classification of a counter-myth therefore lies entirely in its ability to contradict the original myth, thus forcing the adherent to choose. This notion is later, but possibly entirely independently, developed by Roe and Van Eeten (Roe, 1991; Roe, 1992; Roe, 1994; Roe and Van Eeten, 2004) in their concept of counter-narrative. Critiquing a narrative through empirical facts, they similarly assert, is ineffective as ‘critiques do not tell their own story’ (Roe and Van Eeten, 2004: 37). Instead, narratives are questioned through counter-narratives which tell a conflicting and incompatible story, again, forcing subscribers choose. Still, how to create, or perhaps choose, such a counter-narrative is not made entirely clear, leaving a most interesting concept stranded with a number of question marks.

While the concept of counter-myth is still in its embryonic stage, the very notion of change through myth is not. Myths guide action, be it of a transformative or a reinforcing nature. Albeit that myths are commonly used to uphold ruling interests (Tismaneanu, 1998b), they may equally well be used to instigate action which go against reigning hegemonies. Sorel (1999), whose ideas were discussed briefly in section 5.2, asserts that myth is the very instigator of change or even revolution, as it adds substance and legitimacy to social processes of transformation. Myths, in this sense, are ‘expressions of will to act’ (Sorel, 1999: xiii). Semiosis, here, instructs change through myths that oppose dominant social structures. The resonance with the ‘old’ myth is thus reduced as their taken-for-granted beliefs are questioned. Both the semiotics of actors as well as those of social or material phenomena can be contested, leading to new processes of selection and retention and creating new or altered semiotics (Fairclough et al., 2001). Where Barthes sees change through and of myth as a *counter*-action, Sorel considers societal change to be *the* action of myth. Nevertheless, while Sorel and Barthes disagree on the most common use of myth<sup>6</sup>, they thus have similar views on its transformative qualities or potential.

A possible issue with the concept of counter-myth, however, is its reliance on objective logic. Myths do have a factually logical structure, but one that is entirely internal, contextual, and subjective rather than external, universal, and objective. As objective logic is rejected through the

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<sup>6</sup> Barthes sees myth primarily as an element for upholding ruling elite, most prominently the French bourgeoisie, while Sorel considers myth to be the very origin of change. See Tager (1986) for a lengthier discussion.

very definition of myth, it may be considered problematic to apply an equally objective logic to the notion of counter-myth, stating that two contradictory myths cannot co-exist based on the argument of it being illogical. A further discussion on this, and several more, issues would have to be developed before the notion of counter-myth could be applied, analysed, or even defined. Advancing the theoretical concept of counter-myth, then, is proposed as a first venue of future research on myth.

### 8.3 Sustainability as counter

Following the idea that change through and by myth is a process of story contestation, rather than a factual confrontation, the challenge lies in finding as well as applying a counter-myth which opposes the undesirable myth. While the myth of prosperity through mobility has been questioned (Black, 2001; Sheller and Urry, 2006; Chapman, 2007; Banister, 2008; Hull, 2008; Essebo and Baeten, 2012), there is no counter-myth which opposes it verbatim, i.e. a myth stating that *immobility* leads to prosperity. There may be, however, a counter-myth which challenges the myth of prosperity through mobility by presenting values which support practices that conflict with increasing mobility. This thesis has already touched upon the perhaps most commonly spread of these counter-myths, i.e. sustainable mobility. Given that lock-in of a high and continuously rising mobility system is considered unsustainable in terms of limits (set by space, materials, and environmental capacity), the counter-myth which would contradict the persistence of such a system would revolve around clear notions of sustainability as equally defined by limits. For this counter-myth to be effective, it needs to promote and naturalise ideas and practices that contrast or counteract current mobility increase, i.e. it needs to be truly 'counter' not only in appearance or superficial impression, but in essence. Based on a divergent story, institutional policy can create alternative structures, or 'rules of the game' which support societal change (North, 1990).

The prospect of a 'sustainability myth' has been explored by Walker (2003), who defines myth as 'a story that tries to come to terms with, and provide resolution to, something that is beyond our grasp' (Walker, 2003: 7). Walker traces its origin to the latter part of the 19<sup>th</sup> century and the establishment of the first national park (Yellowstone in 1872) and the Sierra club (1892). The myth became increasingly influential during the 1960s as concern over the environmental effects of a range of human practices rose, spurred on by works addressing environmental concerns, e.g. Rachel Carson's *Silent Spring* (Carson, 1962) which still one of the most influential environmental pieces ever written. During this time, the myth also became increasingly institutionalised as organisations were created around issues of environmental depletion, including The Club of Rome, Friends of the Earth, the U.S Environmental Protection Agency, Greenpeace, and the UN Environmental Programme (UNEP). Since then, the concept of sustainability has become as widespread as it has diverse. From being a predominately environmental concept in the 1970's, sustainability has developed into an all-embracing concept which increasingly often includes social, economic, and cultural elements, promoting the notions of inter-dependability and mutual

progression. This ‘Panglossian’<sup>7</sup> (Owens, 2003) nature of the sustainability concept may be an important characteristic for using it as a mythic concept as it opens up for varied and subjective use constructed on the basis of internal, not external, logic. A possible approach to researching myths of sustainability, then, may be to explore the concept characteristics themselves.

As a concept subject to constant dispute, dogmatism, and eclecticism, ‘sustainability’ has joined ranks with concepts like ‘democracy’ and ‘freedom’ in that ‘it is universally desired, diversely understood, extremely difficult to achieve, and won’t go away’ (Lafferty, 2004: 26). As such, it may belong to Gallie’s *essentially contested concepts* (ECCs) (Gallie, 1956). The concept of ECCs has been used and developed extensively over the almost 50 years since it was first coined. Widespread use has, however, come to somewhat dilute the concept, as exemplified by law review literature where ECC has come to signify ‘hotly contested issues’ (Waldron, 2002). Among the phenomena listed as ECC’s in the legal research service *Westlaw*, we now find boycott, bankruptcy, motherhood, harm, merit, speech, author, republicanism, and pornography (Waldron, 2002). Through extensive use, ECC has come to hold a variety of functions where each proponent of a specific function argues for rectitude. A restriction of the concept has therefore been called for by several authors, such as by Smith (2002) who asserts that ECCs need be rather more rare if they are to have any meaning at all.

Going back to the original source, then, Gallie states that ECC’s are ‘concepts the proper use of which inevitably involves endless disputes about their proper uses on the part of their users’ (Gallie, 1956: 169). Crucially, the disagreement is not, at least not primarily, one of *definition* but one of *use* as there is ‘no one clearly definable general use of any of them which can be set up as the correct or standard use’ (Gallie, 1956: 168)<sup>8</sup>.

The use of the sustainability concept has unarguably become truly diverse, defined by its context as much or even more as it is by any pre-understanding of its meaning. Included in the 2001 UN ‘Indicators of Sustainable Development’, to simply name one example, we find: ratio of average female wage to male wage, floor area per person, algae concentration in coastal waters, implementation of ratified global agreements, and total official development assistance given or received as a percentage of gross national product (United Nations, 2001). With such a wide and diverse use, the concept of sustainability has reached the paradoxical state of being both one of the most contested and divisive concepts of our time as well as a taken-for-granted notion, the intuitive understanding of which creates fundamental basis for social action or in-action.

The idea of an essentially contested concept as value-laden, internally complex, and open for continuous redefinition corresponds to one of the fundamental processes of myth, i.e. neologism (Barthes, 1972). This, in turn, is vital for myth to be able to merge contradictory beliefs or values. Paper two discusses perhaps the most paradoxical of these mergers, i.e. the fusion of ‘sustainability’ and ‘development’ in the sense of growth. The merger can be traced to the publication of the Brundtland Report (WECD, 1987) which offered a solution to the highly polarised environmental debate of the 1970s, where growth based on material throughput was

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<sup>7</sup> From the character Dr Pangloss in Voltaire’s *Candide*, for whom ‘all was for the best in the best of all possible worlds’

<sup>8</sup> Gallie further presents seven conditions for essential contentedness, stating that the concept needs to be appraisive, internally complex, initially ambiguous, open to continuous modifications, used both aggressively and defensible against other definitions, based on an exemplar or prototype, and remain active through constant dispute (Gallie, 1956).

starkly contrasted by notions of *Limits to Growth* (Meadows et al., 1972). Rather than seeing the two as conflicting paths to progress, the Brundtland report states that:

Environment and development are not separate challenges; they are inexorably linked.  
Development cannot subsist upon a deteriorating resources base; the environment  
cannot be protected when growth leaves out of account the costs of environmental  
destruction.  
(WECD, 1987: 37)

As a unifying approach, the definition is characterised by pragmatism. Neither material prosperity nor environmental wellbeing need be sacrificed, but rather to work in concert to ensure the needs of both future and present generations.

The challenges this merger of ecological sustainability and material growth poses on the concept, or rather the use, of sustainable development are immense. Lately, the paradox has become yet more pronounced through notions such as ‘green growth’, a concept one may argue is contradictory in terms (Owens, 2003; Essebo and Baeten, 2012).

The second paper discusses these contradictions in theory, yet the empirical application or evaluation of these contradictions from the perspective of myth remains uncharted. The work that was involved with this thesis broached the possibility of a sustainable mobility counter-myth in the SMILE project and the overall municipal work on mobility in Malmö. All interviewees were asked about their notion of sustainability as well as of limits and how the concept and practice of sustainable mobility was used within the SMILE project and their daily work in various capacities of mobility policy enactors. Interesting results loomed just beyond the horizon, but due to restrictions in both topic and time there was no chance of doing them justice within the framework of this thesis. Some of the initial results, however, are presented in paper three, where it is concluded that notions of sustainability within the SMILE project enabled rather than limited further expansion of current mobility practices and, consequently, lock-in. The use of the sustainability concept much overlapped its contradictory use outlined in paper two, where sustainability is merged with development as growth into sustainable growth.

Much more work on the use of sustainable mobility as a counter-myth, or, in this case as an enabling myth, remains to be done. Developing the notion of sustainability as a possible counter-myth to increased mobility lock-in, not least in terms of empirical application, is therefore the second venue for future research suggested here. This could include advancing the notion of sustainability as an ECC, discussing how such a concept is applied to a wicked problem (or the solution thereof), and, of course, explore the use of sustainability in the formulation and application of a counter-myth. The contradictory element of sustainability could be further developed by exploring it based on the elements of myth – fear, storytellers, naturalisation, and transcendence – which are all most present in the concept and conception of sustainability. Further empirical research would be the perhaps most interesting path to take, investigating further how the concept and possibly the counter-myth of sustainability (sustainable mobility/sustainable development/sustainable growth) is used in practice. Most interestingly, future research could explore whether such a myth truly counters unsustainable (limited) practices and thereby, as Sorel would have it, leads to fundamental societal changes or if, as is

suggested by the initial results of this thesis, it is used as an enabling myth more reminiscent of the decoupling strategy of Sørensen and Longva (2011) and Barthes's (1972) myth of inertia.

#### 8.4 Further use of myth in geographical research

The two suggested paths of future research presented so far have both been related specifically to the question of change. The third and final venue for future research takes a broader grip by briefly discussing the application and further development of the concept of myth within the field of human geography. Paper one presents a few possible directions for advance, drawing on the notion of landscape as a topographic idea (Rose and Wylie, 2006; Wylie, 2006; 2007; Merriman et al., 2008). These directions will be summarised here.

In a panel discussion on current yet underdeveloped topics within human geographical research, Merriman et al (2008) present a number of issues which they consider deserve increased attention from researchers within our field. One of these themes is the mystery of inertia, i.e. the question of how and why things maintain momentum or remain static (Merriman et al., 2008). This, of course, has been the topic for this thesis, using the concept of myth as a way to deepen understanding of non-change; a central issue within myth theory research (Barthes, 1972; Tismaneanu, 1998b; Schöpflin and Hosking, 1997). In addition to this issue, paper one presents two more fields of exploration drawing on themes presented by Merriman et al (2008), i.e. the importance of the poetics of language and the significance of everyday practice.

The importance of (the poetics of) language lies at the very heart of myth theory and is emphasised throughout all stages and aspects of myth research, such as by Barthes's definition of myth as speech (Barthes, 1972), the notion of semiosis or semiotics as the source of mythic power (Barthes, 1968; 1972; 1986; 1994; Lincoln, 1999), the process of emplotment (White, 1973), and the fundamental role of the storyteller (Kearney, 2002). As such, myth theory or the concept of myth may be a way to approach the issue of language within geographical research, incorporating both elements and authors of myth. Most importantly, applying myth theory to issues of language would emphasise the naturalised aspect of speech, spoken as well as written. The taken-for-granted quality or aspect of language has not gone unnoticed within geographical study (see for example Olsson, 1974; 1991), nor has the intrinsic link between geographical realities and the ways in which we depict, or speak about, them (Agnew, 1987; Barnes and Duncan, 1992; Buttimer, 1993). For continuing and deepening this understanding of the role of language in the making and making sense of place, myth theory may offer several aids including a comprehensive theoretical framework, specific focus on the processes of emplotment and naturalisation, and, not to forget, a large body of literature which specifically addresses issues of (mythic) language. The issues addressed through myth theory correspond with traditions in human geography going back to the 1960s and Lowenthal's perceptual geography (Lowenthal, 1961; 1967) and through the cultural turn of the 1980s and 1990s (Hall, 1980; Jackson, 1980; Agnew, 1987; Duncan and Duncan, 1988; Cosgrove, 1992; Gregory, 1994; Thrift, 1996). In the past two decades, more specialised branches such as literary geography (Lando, 1996; Sharp, 2000; Saunders, 2010; Hones, 2011) have emerged, which address specific issues of text-place



interconnections. Following and expanding on this tradition, the concept and literature of myth could be highly useful additions to the understanding of the making of place through language.

The naturalised aspect of language is equally relevant for ‘external’ as it is for ‘internal’ research. This thesis has applied an outwards gaze – looking at the use of myth in the setting of urban mobility policy and practice – but applying the concept and characteristics of myth would be equally relevant for self-reflecting research, i.e. the language we, as members of an academic community, use and are guided by. Specific terms hold taken-for-granted assumptions and connotations, the academic implications of which cannot be overstated. Applying myth theory on introspective analysis of geographical research is a vast and, to my knowledge, mostly unexplored venue of research<sup>9</sup>.

The second issue – everyday practices – has also been addressed in this thesis, although less explicitly than the issue of lock-in. Merriman et al (2008) seek a greater understanding of true everyday practice – e.g. going to work or tending the garden – rather than the ‘faux’ everyday practices which are most often studied – graffiti or performance art – but not truly part of many peoples’ everyday life. These non-rarefied practices are central to myth theory as it addresses un-reflected and everyday beliefs and the practices they guide (Barthes, 1972; Hall, 2006), i.e. the truly everyday or even mundane beliefs and subsequent practices we take for granted. Studying everyday practice or, even more so, everyday un-reflected practice can, however, be difficult as they are in a way ‘invisible’. Myth, with its pronounced interest in the links between language (or speech) and practice may be a way to approach the issue by means of semiotics, while highlighting the naturalised, the taken-for-granted, the everyday. As such myth or myth theory can be applied within many branches of human geography, e.g. new urbanism which centres on the dialect relationship between urban representations and everyday practice (Bailey and Bryson, 2006).

Even in the very most concrete sense of the word, there are numerous geographical or geographically relevant myths to pursue of which paper one suggest two: myths which revolve around perceptions of the frontier (Turner, 1920; Ley, 1974; Melbin, 1978; Livingstone and Harrison, 1980; Waitt and Head, 2002), and the increasingly prominent themes, not least within urban studies, of utopia and dystopia (Ricour, 1986; Claval, 2001; Gordon and Ward, 2002; Pinder, 2002). There are, of course, many, many more. Several geographical explorations (in the academic, not literal sense) have been made where the concept of myth could be, and sometimes has been, useful, such as Davidson’s (2005) adventure into the idea of the north, Buttimer and Mels’s (2006) even more specialised journey into the making of geography in Sweden, and, on the other end of the geographical spectra, Lewis and Wigen’s (1997) voyages into the myth of the continents. It is here, however, important to distinguish the concept of myth as defined and used within myth theory from that of common use. If myth is used in the sense of amusing tale or misconception, then while it may spur initial interest and an intriguing book title (as in the case of Lewis and Wigen’s *The myth of continents*) it offers little in terms of theoretical advancement. Like Gallie’s essentially contested concepts, the term ‘myth’ needs to be rather more distinct if it is to offer anything more than a grab for attention. The third and last venue for further geographical research on and with myth is therefore to develop a deepened geographical understanding and

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<sup>9</sup> See Thomas et al (2011) for an interesting analysis of how fictional writing affect everyday academic work. Also see the works of Tuan (e.g. , 1991) on the emplotting of geographical storytelling.

use myth which could make the concept of myth not only a gateway to new fields of academic literature, but an intrinsically valuable concept for addressing and understanding how perceptions of place form spatial realities.

## 9 Conclusions

This thesis has addressed the issue of system inertia or obduracy by exploring the intersection of two concepts which, in spite of their overlapping and supporting characteristics, are rarely if ever brought together: i.e. myth and lock-in. Based on the initial presupposition that myth is an underexplored, yet potentially highly useful concept for geographical studies of lock-in, the thesis has approached the more specific question of the role of myth in the lock-in of high mobility systems. In so doing, the thesis has adopted a systems approach which emphasises both the interconnectedness of system elements – actors, institutions, beliefs, materialities – as well as the overall processes prone to create system inertia or lock-in. Lock-in, comparable to the concept of path-dependence, is a self-reinforcing process, the beginning of which can often be traced back to a critical juncture or turning point when, due to system change or even collapse, a new path must be chosen from which it then becomes increasingly hard to diverge. Importantly, systems do not become autonomous, but rather acquire momentum as elements, or forces, with vested interests in system preservation and growth merge in time and space. While much importance has been accredited to technological system elements, lock-in is a highly social process as it is dependent on social and societal acceptance and support or, phrased slightly differently, on belief in system legitimacy. The role of belief, while often emphasised, is still only little understood. The concept of myth, therefore, has been applied in this thesis as an approach to the importance of taken-for-granted, or naturalised, beliefs which support and sustain system inertia.

The particular lock-in addressed in this thesis is that of a high mobility (in the sense of movement across space) system. The interest stems from the issue of sustainable mobility, or rather the transition to such a mobility system. The thesis views the issue from the ‘other’ side, i.e. rather than asking what can be done to achieve a sustainable mobility system, it asks what it is that is stopping us from doing so or from having done so already. The problem is not, however, defined as mobility itself, but rather as limits, i.e. the outer boundaries which make infinite expansion of any system unfeasible. For mobility practices, these limits are set by several restrictions, including limited space, finite material resources, limited environmental capacity, economic boundaries, and restricted societal acceptance of nuisances such as noise, congestion, and aesthetic devaluation.

The thesis asserts that mobility lock-in can be characterised as a ‘wicked’ problem; i.e. it has no clear definition; no stopping rule; it is judged in terms of good and bad, not right and wrong; there is no test of solution accuracy; any attempt at a solution is irrevocable; it has innumerable possible solutions; it is essentially unique; it is problem symptomatic rather than problem reducible; there can always be found justifications for solution failure; and there is no margin of error. As an un-definable problem entirely reliant on elusive judgement, wicked problems and their solutions require direction, contextualisation, legitimisation, and naturalisation that cannot be derived from the problem or solution as such. A possible way to achieve this, the thesis suggests, is to draw on the legitimising, contextualising, and naturalising characteristics of myth. These characteristics become even more vital at critical junctures, or turning points, where choices may have to be made based on fragmented and limited information. The processes of

system lock-in, wicked problems, and myth are thereby intrinsically interlinked as wicked problems leading to system inertia rely on the naturalisation provided by myth.

To address the issue of the role of myth in lock-in of high mobility from a geographical perspective, several steps have been taken which correspond to the three papers included in the thesis. First, the concept of myth itself has been presented and probed, paying special attention to its use and usefulness for geographical research. As myth, in the sense that it is used within myth theory – a transdisciplinary field of research centred on issues of naturalised, or taken-for-granted, beliefs which inform practice – is not commonly used within geographical research, the entire first paper has been devoted to the issue of its potential value for studies and issues within our field.

Paper one develops and defines the core arguments presented throughout this kappa, laying the groundwork for using myth as a concept in geographical research. It asserts that myth is a shared and emplotted story which guides and legitimises practice by seemingly transforming beliefs into taken-for-granted facts. It relies on neologism, sometimes known as semantic extensions, by which either new words or new meanings of existing words are created and connected to limited contingencies. Neologism enables the myth to create its own internal logic; a logic that is subjective, internal, and contextual rather than objective, external, and universal. The elements of myth are emplotment (asserting a chronological order to and internal connection between events that would otherwise be scattered across time and space), fear (portraying alternatives as unviable or unthinkable), transcendence (a vision of positive change over time or a ‘happy ending’), and naturalisation (making that which is created appear natural, self-evident, beyond questioning). Myths guide action and have, as such, material outcomes; perceptions of place from spatial realities. Myth is based on belief, not objective facts, and compliance by its adherents to the point where it holds influence over the way in which they choose to live their lives. A myth, therefore need neither be entirely false nor entirely true, only entirely believed; truth is a non-issue. Defined as such, myth can be a useful concept for the study of numerous geographical issues; including the importance of language and its influence over spatial formation; everyday and unreflected practices or those practices we take for granted; and, of course, the mystery of inertia, obduracy or lock-in. In addition, there are many specific geographical myths which could be addressed through a more developed understanding of myth, such as the myth of the frontier, utopia and dystopia, and the creation of cities, regions, nations, or even continents.

The specific myth addressed in this thesis, which has been chosen based on its vast and indisputable influence over our notions of mobility and, as a result, mobility practices, is the myth of prosperity through mobility, which is discussed in paper two and three as well as throughout the kappa. The myth states that physical mobility is a necessary and never-ending force for driving societal development as defined by economic growth. High and rising mobility is seen as the blood flow of society, mobility infrastructure as the arteries. The myth arouses connotations of conquests, freedom, domination, increased standard of living, and most of all, societal progress. In contrast, the myth portrays the alternative – a low-mobility society – as a dystopia; a stagnant society where the severed arteries of mobility hinder or even halt economic and therefore also social and environmental development. The myth naturalises positive connotations such as flow, flexibility, progress, or moving forward (transcendence) as well as the negative associations brought on by terms such as stagnancy, inertia, congestion, stuck or standing still

(fear). Again, the problem with such a myth is not the legitimisation it gives to mobility practices as such, but that it spurs or even demands boundless mobility escalation. There is no saturated level of mobility, rather the system requires continuously rising levels of mobility and commitment, leading to a system lock-in where ever more elements – organisations, institutions, practices, materialities, beliefs – merge, making it increasingly hard to reduce commitment or, even more so, to return to the point (the critical juncture) where alternative paths were still available.

Having discussed the use of the concept of myth in geographical research and argued for its role in the lock-in of high mobility systems, the thesis moves on to apply these conceptions in practice, the results of which are presented in the third and final paper. The methodological approach is that of a case-study which has been analysed using critical discourse analysis. The study is set in the Öresund Region – a transnational region spanning the south-west of Sweden and the eastern parts of Denmark – and focuses specifically on the city of Malmö, Sweden's third largest city after Stockholm and Gothenburg. The city of Malmö faced a critical juncture in the 1990s as its considerable industrial sector rapidly declined and subsequently collapsed. At this point, several options were available of which the city of Malmö chose a path of regional enlargement and cooperation, a transnational and highly flexible work market specialised in highly skilled professions, and an expansion of higher education institutions. At the heart of the strategy was an unprecedented investment in and focus on the development of inter-regional and intra-urban mobility.

The role of myth in the specific case of Malmö has been traced and explored through two types of lock-in – infrastructural and institutional – which are presented and discussed in paper three. Infrastructural lock-in emphasises myth-materiality connections, i.e. the spatial outcomes of naturalised perceptions. It has been studied through a regional analysis of infrastructural mobility developments and their justifications through the myth as presented in both municipal strategic documents and, to a lesser degree, newspaper articles. Infrastructural investments are long-term, non-tradable, and investment heavy in the very broadest sense of the term including financing, materialities, and public acceptance. They comprise innate lock-in elements both in the form of physical durability as well as in the form of an 'investment sink' as making alterations of already built infrastructure is not only very costly in itself but would also invalidate the original spending. Infrastructural developments are therefore highly dependent on clear and coherent justification and legitimisation as well as a contextual framework, or plot, into which they can be fitted. These are the vital components which can be provided by the myth. The study of infrastructural lock-in in Malmö shows that the role of the myth of prosperity through mobility has been central in legitimising and naturalising infrastructural developments. The two major infrastructural projects that have been carried out since the redirection following Malmö's critical juncture in the 1990s – the Öresund Bridge (opened in 2001) and the City Tunnel (opened in 2010) – are legitimised based on their critical role as enablers and even creators of regional development defined as economic growth. The Öresund Bridge has experienced rapidly increased patronage to the point that it approached its capacity limits of both number of trains on the bridge and the number of passengers on the trains during peak traffic around 2006. The City Tunnel, which connects existing infrastructure through a tunnel under central Malmö, further increased mobility flow and therefore demands in capacity put on the bridge.

Interestingly, the success of the Öresund Bridge and the City Tunnel has been taken as evidence of the soundness of the mobility strategy and they are today repeatedly referred to as the heart (the bridge) and backbone (the tunnel) of regional development and growth. As system expansion approaches limits in capacity – a development that would, according to the myth, halt regional and urban progress – the element of fear becomes more pronounced. More infrastructural developments are therefore advocated in the interest of maintaining and expanding the high mobility system, including a second bridge between Sweden and Denmark (Helsingborg-Helsingör) as well as increased intra-urban capacity in Malmö through a tram system. As system expansion continues based on the notion of mobility as a creator of prosperity, lock-in is, in itself, defined as a success.

Institutional lock-in is the result of organisational learning processes, historical framing, and routinisation of management which creates taken-for-granted problem and solution formulations, or ‘rules of thumb’, that align with ruling institutional practice. It has been studied through the case of SMILE (towards Sustainable Mobility for people in urban aEras), an EU funded project aimed at creating sustainable urban mobility and operated by the Municipality of Malmö between the years 2005-2009. The motive for choosing a project specifically aimed at creating sustainable mobility was that here, if anywhere, might we find opposition to the myth of prosperity through mobility as it advocates unsustainable system expansion. Through interviews conducted with a range of projects actors – municipal employees, project evaluators, and representatives of the regional transit company – it can however be asserted that the myth of mobility through prosperity is widely spread and adopted in institutional practice. All interviewees discussed the importance of high and continuously increasing mobility in terms of naturalised knowledge, or a statement of facts. The discursive strategies of repelling (openly rejecting) and decoupling (openly endorsing, but rejecting in practice) were used to dismiss any alternatives to the adopted strategy of continued mobility escalation. The rejected option was that of restricting or reducing mobility in order to create sustainable mobility; a strategy that was considered counterproductive and unviable. Surprisingly, representatives of the regional transit company were more critical of the strategy to increase mobility, an ‘attitude’ that was characterised as ‘unappreciated’ or ‘unrealistic’ by municipal employees. Decoupling was demonstrated through discrepancies between official project aims of working against macro level trends of business as usual (increased mobility) and the clear rejection of any such aims or strategies in practice. Decoupling was justified through political unfeasibility, generational problems (the set minds of the older generation, opposing radical change), or, most commonly, through the myth as this clearly states that any mobility restrictions would lead to halted development, making sustainable mobility easy to endorse in theory, but hard to apply to practical work.

The result of both infrastructural and, perhaps even more so, institutional lock-in supported by the myth of prosperity through mobility is an adopted strategy of mobility shift as opposed to mobility limitation. ‘Green’ modes of transport – buses, trains, bicycles, walking – are promoted as means for or enablers of a continued mobility expansion. Increases in green modes of transport patronage (which have been considerable during the past decade) are seen as shifts to sustainable mobility. However, extensive travel surveys shows that while car trips have been reduced *relatively* to ‘green’ modes of transport, the *actual number* of car trips have not. This leads to the conclusion that overall mobility has risen to the extent that a status quo or even an increase

in the number of car trips are perceived as a relative decline, a statistical incongruity that is officially used to support arguments of an existing sustainable mobility transition. The myth of prosperity through mobility permeates regional and local mobility processes, including the legitimisation of past and future infrastructural developments, institutional praxis, the solution definition in terms of a mobility shift, and, perhaps most importantly, the very notion that locking in into a high and ever rising mobility system is a positive, necessary, and boundless development.

Ultimately, the aim, and hopefully achievement, of this thesis has been to develop the concept of myth to the point where it can aid in the advancement of a broad range of geographical issues, be it through further conceptual development, empirical exploration, or simply through a fundamental fascination for the uniquely human practice of storytelling.

## 10 References

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