

Gender Mainstreaming European Transport Research and Policies

**Building the Knowledge Base
and Mapping Good Practices**

T R A N S G E N

**Co-ordination for Gender Studies
University of Copenhagen 2007**

TRANSGEN

Gender Mainstreaming European Transport Research and Policies Building the Knowledge Base and Mapping Good Practices

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The report is issued by:

The Co-ordination for Gender Studies

University of Copenhagen

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Transgen Special Support Action supported by EU FP 6. 2006-2007.

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Images: Courtesy London Transport Museum

Graphic Design: Anne Houe

Print: Specialtrykkeriet Viborg A/S

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EXECUTIVE SUMMARY

KEY RESULTS

- This report documents that there are clear and persistent gender differences in travel patterns. Men consistently travel further than women, men are more likely to travel by car and women by public transport, and women's trips tend to be more local. Explanations to these differences are linked to unequal gendered relations in the household and labour market and urban structures as well as gender socialisation. This means that men and women make different uses of a shared system of transport.
- Transport is an overwhelmingly male-dominated sector. At the EU level, political committees in the transport sector as well as transport research and advisory boards have a marked gender imbalance with less than 15% female membership in most boards and none with equal representation. This also goes for transport-related committees at national levels. Yet with one notable exception: Sweden has a 50-50 balance in the National Transport Committee.
- In general, the transport sector is a gendered work space. In surface and water transport, female workers make up less than 20% of the workforce. Research suggests that the sector is dominated by masculine values and practices making it difficult for women to enter these fields. Inclusive work environments need to be created to support the employment of more women in the sector. There is a need for organisations to raise awareness of gender stereotypes in the organisation.
- Worldviews guiding our common sense and perceptions of transport are gendered. While the car was regarded as gender neutral in the beginning of the 20th century, research shows how both car travel and the ideas of freedom and movement associated with the car are persistently linked to masculine identity.
- In adverts, images, film and literature, there is a gendered representation in which men more often are represented as travellers and women as having domestic respon-

sibilities. How can such gendered and aesthetic practices be handled in relation to equality, sustainability and environmental priorities?

- Current gender mainstreaming initiatives in the transport sector relate to a wide range of issues: They relate to planning and policy, safety issues, gendering of technology as well as employment. The report substantiates that the implementation of equality programmes, and not their formulation makes up the biggest challenge. One programme does not solve all problems, but opens up new avenues for initiatives and intervention.
- Gender is a central stratifying factor in transport use at all levels. In order to provide a more complete picture of gender differences, and in order to qualify EU goals of combating multi-level inequalities, there is a need to link gender with the broader axes of inequalities, namely ethnicity, sexuality, age and handicap in future studies of transport and mobility.

GENDER MAINSTREAMING THE TRANSPORT SECTOR POLICY RECOMMENDATIONS

- Gender mainstreaming transport concerns how overall priorities in transport are made. High-level strategic policy-making should include and address the issue of gender equality and sustainability simultaneously and assess how they influence each other.
- Explicit gender equality policies in the transport sector need to be developed at national and EU level. Both in terms of *women's representation* and in terms of *gender dimensions* in the transport sector. 'Adding' women is necessary, but not sufficient.
- Mainstreaming gender equality into transport policy should consider how transportation affects women and men. Accordingly, future transport policy should emphasise accessibility as well as mobility.
- Traffic planners and policy-makers need to take into account gender from a user perspective and to integrate women's values, needs and interests in transport policy, as well as incorporate the voices of women users in planning.

- Mainstreaming gender equality into the transport sector should focus on the political and organisational elements in public and private transportation structures. Equal representation in decision-making at all levels needs to be ensured.
- Gender mainstreaming the transport sector includes the creation of inclusive work environments to support the employment of more women in the sector. There is an urgent need for organisations to raise awareness of gender stereotypes in the organisation.

GENDER, TECHNOLOGY, TRANSPORT AND SUSTAINABILITY LAUNCHING OF A EUROPEAN PLATFORM

- There is a need for more data and analysis concerning the gendering of the transport sector at a structural level. Both in terms of basic knowledge drawing gendered representation and employment, but also about gendered organisational processes and cultures and the ways in which the sector continues to be male-dominated. If the transport sector is to be competitive in a context of scarce labour power, this is urgent.
- In order to develop and implement gender mainstreaming in the transport sector, the knowledge base needs to be extended and improved substantially. New research programmes focusing on transport in broader frameworks of rights and duties, of values and cultures, of structures and identities as well as the production of new technologies and their implementation need to be launched.
- In order to bridge the gap between science, policy-making and implementation, there is a need for the launching a European Union-based platform of gender, technology, transport and sustainability. The aims of the platform are to:
 - Create synergy between already existing, but separate fields of science, policy-making and innovation.
 - Initiate gender mainstreaming of strategic and political initiatives: the EU/FP 7 research programmes in particular.
 - Boost new knowledge-based technologies and innovations.¹

NOTE

1. This is in line with the suggestions in the *Renewed EU Sustainable Development Strategy*. Council of the European Union. 10117/06. June 2006.

FOREWORD

Maria Cristina Marolda

Programme Officer in the Surface Transport Unit

Research Directorate – European Commission

A modern sustainable transport cannot avoid taking into consideration the interactions between transport policy and other community policies, such as environment, energy, economy, health, industrial activity as well as all the societal implications of the same.

Gender differences in lifestyles should be at the centre of such attention.

Transport is a traditionally male-dominated sector, both from the employment point of view and for the values that are there embedded. But it is also widely recognised that gender sensitive issues are many and highly relevant.

First of all we can mention *accessibility*: women – as well as elderly and children – who often travel with them – have special mobility needs that are not always duly taken into consideration, like step height, seat design, positioning of grab rails in public transport equipment, etc.

Comfort, safety and security (both *real* and *perceived*) are seldom considered for travellers presenting physical and psychological differences from healthy adult men. A typical case is the point of interchanges between different transport modes, which in many cases discourages a more diffuse use of public and intermodal transport.

Also from the *environmental* perspective the gender relevant social factors that give the impression of protection and quality of the environment are not subject to specific attention.

The present study has analysed these and various other aspects with the aim of guiding towards a new approach in planning, design and policy related to transport. It is clear that we are confronted by a very complex system, the solutions to which should be sought even beyond an interdisciplinary approach; we need to move towards a cross-thematic integrated approach that can take into consideration at the same time the advanced available technologies and the variables due to the contin-

uously evolving society in which we live. Gender patterns, roles and modes are constantly changing, and it is vital to abandon and overcome traditional stereotypes and references.

We still have a long way ahead of us, but the path indicated on the following pages is a very good start.

FOREWORD

Dr. Thomas Alslev Christensen

Head of Department,

The Danish Ministry of Science, Technology and Innovation

A Since the early 1990s, gender mainstreaming has been developed as a new policy tool. However, the introduction of this new tool in sector policy areas still lags behind. The Transgen project offers a new and interesting initiative in this respect. It introduces gender mainstreaming in the European transport sector, including the transport system, research and policies.

This is the final report from the project Transgen. Transgen proves that transport policy-makers and researchers have to pay attention to gender issues for an increased impact of transport policies and gender mainstreaming to succeed.

The Transgen report is an excellent source of inspiration for everyone working with transport policy and research as well as within other policy areas. It shows that there are clear and persistent gender differences in transport patterns. The report proves that men consistently travel further than women. Men are more likely to travel by car and women by public transportation, and women's trips tend to be more local. These differences are also explained. Explanations are linked to unequal gendered relations in the household and labour market, urban structures as well as gender socialisation. This means that men and women make different uses of a shared system of transport. There are many other interesting conclusions and issues in the report.

Hence, what we can learn from Transgen is that gender aspects must be incorporated in all new developments, research and innovations and that there must be a bigger focus on different user needs. However, there is still a need for more research in the field of transport and gender.

To policy-makers, Transgen provides an opportunity to give prominence in changing the focus of the transport policy in the European welfare states.

I believe that the report marks an important step in introducing gender mainstreaming. It will pave the way in the area of transport, since the method introduces new knowledge into research and policies in all sectors of society.

INTRODUCTION

Dr. Hilda Rømer Christensen

Head of Transgen

How can goals of sustainability be linked with goals of gender equality in making transport and mobility available for all? At present, there are marked gendered profiles of different modes and uses of mobility and transport. In general, women use public transport more than men do, and they travel shorter distances. Is it possible and convenient to translate women's mobility patterns into more overall models for sustainable developments? Or are women's different transport modes just another indication of inequality? Meaning that women are not able to take part in the labour market, leisure and other activities to the same extent as men?

The Transgen project addresses the overall need to redress and link ideas of transport and mobility with gender fairness in Europe. This report advances our understandings of gendered perspectives on current and future transport policies and contributes both to clarifying the goals of European transport policy and to balancing the goals of transport, sustainability and gender equality. In responding to the call for a broader and more flexible transport policy related to economic, social and environmental needs, as well as to the call for a more gender-balanced Europe, the report suggests a complex and integrated framework for understanding some of the major goals of the EU in the 21st century.¹

The Transgen project has aimed at translating and advancing the idea of gender mainstreaming in the field of transport and mobility by focusing on the following questions:

- How can mainstreaming goals be ensured in relation to planning, production and decision-making processes in relation to transport?
- How can gendering (gender mainstreaming) be linked to current goals of *greening and smarting* the European transport systems?
- How does gendered access to and use of transport systems affect the overall European goals of enhancing employment and competitiveness?

The linking of gender and mobility can be seen as vital in relation to visions of the future European Union, where goals and realities at present seem to be paradoxical and counterproductive. On the one hand, there are the current objectives of European transport policy: to make transport sustainable, and at the same time to meet societies' economic, social and environmental needs. According to the strategy, this implies a shift towards the least polluting and most energy-efficient modes of transport, in long distance and urban travel, as well as efficient combinations of different modes of transport.

On the other hand, accounts of transport developments in the European Union seem to undermine this vision. Over the last decade, use of energy-demanding and polluting forms of transport has increased decisively, while energy-saving and less polluting forms of collective transport have shown lower increases. Future transport models do not show any distinct changes in this pattern. For the next decade up till 2020, it has been estimated that collective surface transport by rail and road will stagnate. Transportation by private cars will increase moderately, while airborne traffic will increase in a steep curve.²

This dilemma is even more pressing today, due to the acknowledgement of man-made climate changes and the high-level campaigns aimed at restricting CO₂ emissions at European and global levels. This report presents a variety of angles and issues, where gender and gendered approaches provide a guideline for future priorities, clarifications and improvements.

The Transgen project is the result of a Special Support Action financed by the European research programme FP6. The report and its policy recommendations is also the result of joined efforts made by many stakeholders who assisted in the extensive process of bringing together existing knowledge and experiences in the field.

The Transgen Advisory Board, a high-level interdisciplinary group of European scholars, who qualified the entire process by submitting valuable suggestions and comments for the report and the policy recommendations through meetings and running communications. See Appendix A.

The *Transgen Expert workshop*, held in Brussels in June 2005, provided a valuable forum for exchanges of knowledge, ideas and practical experiences among scholars, policy-makers and civil servants from national units and the EU Commission and Parliament. See more on <http://www.sociology.ku.dk/koordinationen/transgen/>.

And finally, the *Transgen project team* at the University of Copenhagen who met the challenges of this project with enthusiasm and high abilities. The team consis-

ted in Dr. Helle Poulsen, who co-ordinated both scholarly and administrative activities, Dr. Helene Hjorth Oldrup, who contributed substantially to the making of the report together with the academic research assistants, cand.mag. Tea Malthesen, stud.scient.soc. Michala Hvidt Breengaard and stud.mag. Mathilde Holmen. The project has been headed by Dr. Hilda Rømer Christensen.

Last but not least we would like to convey our thanks to all institutions and persons who contributed to the progression of this project. Thanks to the ministries, agencies and institutions that responded to our questionnaires. And cordially thanks to *Danro*, the Danish research office in Brussels, for providing information and support and for hosting meetings and the Expert workshop. And thanks for the assistance and support from our EU Project officer, Karen Slavin, and the staff at the DG Research unit, *Scientific Culture and Gender Issues*.

Through the Transgen project we all learned that the field of transport and gender equality is demanding and complicated. In order to bring about change, both new interdisciplinary research programmes and more substantial political interventions are needed. We hope that the Transgen project will contribute to making a difference for perceptions and political practices for future European transport and gender-balanced mobility.

NOTES

1. The Amsterdam Treaty and the draft EU Constitution provide that promotion of equality between men and women should be a task of the European Community. This applies also to all other activities such as the EU research programmes and transport policy.
2. *Keep Europe Moving. Sustainable mobility for our continent*. European Commission, Directorate-General for Energy and Transport. 2006.

1. Background



Alfred France 1911, TfL/London Transport Museum

The enhancement of transport and free mobility counts among the high-ranking goals for Europe in the 21st century. Transport is a central element in the construction of Europe as a coherent entity and the goal of securing the free mobility of its citizens. This is demonstrated by the proposal of a new transport policy, *Europe at Crossroads – the need for sustainable transport* (EC 2003), starting with the statement: “We Europeans take our mobility for granted.... we can move around freely”. Yet the aim of free movement of citizens – as well as of goods – invites to investigating how the development of infrastructure affects social life in a gender perspective. Indeed, the existing scattered research in the area has proved that there are marked gendered profiles in relation to different modes and uses of mobility across European member states, from north to south and from east to west. A persistent pattern remains that women use public transport more than men and travel shorter distances. Indeed, women’s constrained mobility has been demonstrated by a new but by now well-developed literature (see, for instance, Christaldi 2005; Grieco et al. 1989; Hjorthol 1990, 1998, 2000; Houillon 2004; Næss 2007; Polk 2004; Hamilton et. al. 2006).

At the same time, the European Union represents the laboratory of the world in terms of implementation of the gender mainstreaming in a whole region at the current moment. A current definition of gender mainstreaming states the complexity of the notion in saying:

“Gender mainstreaming is the integration of the gender perspective into every stage of policy processes – design, implementation, monitoring and evaluation – with a view to promoting equality between women and men. It means assessing how policies impact on the life and position of both women and men – and taking responsibility to redress them if necessary. This is the way to make gender equality a concrete reality in the lives of women and men creating space for everyone within the organisations as well as in communities – to contribute to the process of articulating a shared vision of sustainable human development and translating it into reality.” (Rees 2002)

It is a unique situation that invites to profound analysis, clarification and identification of new areas where gender-specific actions might be taken.⁵ So far the thematic area of transport and gender mainstreaming are issues that have been central, but treated separately in European research policies and programmes up till now.⁶ This report contributes to uniting these two areas by applying gender mainstreaming as a perspective to the thematic area of transport, by developing a conceptual

background, giving research overviews and concrete examples of practice. It builds upon and continues previous initiatives in this area, such as the UK Gender Audit on transport, the report *Women and Transport* produced for the European parliament and also initiatives on gender and transport at the World Bank.

Transport is an important industry in itself; it makes a major contribution to the European Economy. In 2006, transport counts for about 7 % of the GDP and for 5 % of the employment in the EU. This makes analysis of how gender and equality can be integrated at all levels in the EU activities on transport and mobility highly relevant. However, at the same time the transport sector does not exist in a vacuum, but is part of the broader social, economic, material and political structures, which in themselves are undergoing rapid changes. Some of these are increasing mobility, new information technologies, the increasing spatial and temporal complexity of social life, changing family and social relations, and so on. Further, in the current context, the transport sector poses its own challenges to gender mainstreaming the sector. Thus, the linking of gender and mobility is vital in relation to visions of the future European Union, where goals and realities currently seem to be at odds with each other. *On the one hand*, there are the current objectives of European transport policy: to secure individual mobility of all citizens, to make transport sustainable, and at the same time to meet societies' economic, social and environmental needs. According to the strategy, this implies a shift towards the least polluting and most energy-efficient modes of transport, as well as efficient combinations of different modes of transport. *On the other hand*, statistical accounts of transport developments in the European Union seem to undermine this vision. Over the last decade, use of energy-demanding and polluting forms of transport has increased decisively, while energy-saving and less polluting forms of collective transport have shown lower increases. Future transport models do not show any distinct changes in this pattern. For the next decade, up till 2020, it has been estimated that collective surface transport by rail and road will stagnate. Transportation by private cars will increase moderately, while airborne traffic will increase in a steep curve. To the current European transport sector, this presents serious challenges and dilemmas. It is central to the functioning of the European internal market, but contributes also to the CO₂ emissions and other negative environmental impacts. This raises complex questions about how the EU/FP7 goal of transport benefiting the citizens and society in a broad and democratic sense – including gender equality – while enhancing sustainable developments and respect for the environment may be realised.

This report aims to develop gender mainstreaming in the field of transport as a

research strategic and political approach and make it more sustainable and complying with overall EU aims of promoting equality between men and women in all its activities.⁷ Gender mainstreaming the thematic area of transport implies a focus on the following questions:

- How can mainstreaming goals be ensured in relation to planning, production and decision-making processes in relation to transport?
- How can gendering (gender mainstreaming) be linked to current goals of *greening and smarting* the European transport systems?
- How does gendered access and use of the transport system affect the overall European goals of enhancing employment and competitiveness?

Gender mainstreaming is a knowledge-based strategy that requires theoretical gender research in order to be implemented. For gender mainstreaming strategies with regard to transport and mobility to be developed, knowledge about the sector from a gender perspective is therefore necessary. This report sets out to assess the ‘state of the art’ of knowledge about gender and transport, as well as to look at new gender mainstreaming practices in the transport sector. The aim is to provide a starting point for beginning to think about gender mainstreaming in the transport sector. In doing so, it includes a focus on sustainability, also mentioned as one of the key objectives in the EU definition of gender mainstreaming. According to this, gender mainstreaming must contribute to a process of articulating sustainable human development. In doing so, the report suggest a framework for ways in which to delimit and define this area of research as well as provide one of the few comprehensive overviews of scientific research in this area. This report invites scholars and practitioners to participate and advance in this debate. We do not advocate one approach at the expense of others. Rather, as we shall see, all understandings and approaches are active in the field.

1.1 OUTLINE OF THE REPORT

This chapter has provided the background for this report, and in chapter 2 we will present the conceptual understandings that are used to frame this report. The chapter is divided into four parts. As gender equality can be articulated in many different ways, and since gender equality is a relatively new concept in relation to the

transport sector, we will begin the chapter by sketching how gender equality and gender mainstreaming can be understood in relation to the transport sector. The second part of the chapter presents central aspects of the gender mainstreaming issues, while the third part looks at existing research thematising the transport sector from a gender mainstreaming perspective.

In the following chapter, the two chapters of the report look at the transport sector in terms of the gendered individual user and the gendered transport sector. Chapter 3 is based on a research mapping of existing scientific research. The first section maps research into travel patterns, which form the largest part of the research. This body of research is concerned with documenting men's and women's travel patterns, and forms the starting point for any gender mainstreaming strategy. The second part looks at research exploring symbolic meanings of transport and mobility in everyday life and popular culture. This body of research is relatively small, but it highlights how transport is embedded in more general cultural understandings. Finally, the last sector suggests some of the main issues, which have been addressed in this body of research, including fear and safety, new information technologies, and sustainability. The chapter builds upon an extensive literature search carried out in main databases in all scientific areas (social science, humanities, science and transport). By mapping the field of gender and transport, we wanted to map existing scientific material, focusing on scientific material, i.e. research published in international and peer-reviewed journals, and conference proceedings and books. However, at the same time given the marginal status of the area and its close connection with practice, a large amount of grey material exists, i.e. scientific reports published by research institutions or universities and by public and private institutions. We have included material that seemed particularly interesting and of a high quality. As a way to delimit our searches we focused on the Western World and on newer material, i.e. material published after 1990. However, material from before 1990 is also included as far as it seemed relevant.

Chapter 4 looks at the gendered transport sector, focusing on the structural level. The structural level focuses on women's and men's participation in and influence on decision-making, planning and policy and on the gender-segregated occupations in the transport sector. We will here only cover a small part of this large sector and take a closer look at the question of women's participation in decision-making as well as in employment in the transport sector. The information presented in the chapter builds upon different sources. The first part presents the gendering of the highest political and research levels in relation to the transport sector in

most EU countries. This part is based on information found on the web or obtained through direct contact to the relevant institutions. The second part presents the gendering of employment in the sector and is based on existing European statistics, and the last part provides a presentation of existing research into employment relations in the sector, enabled by the extensive literature search described above.

In Chapter 5, we look at gender mainstreaming in transport policy and planning. The first section of the chapter presents some gender mainstreaming tools, that have been used in other sectors. The second and main part presents concrete examples of gender mainstreaming initiatives carried out in the transport sector. They are organised under the following themes: policy and planning, fear and safety, gendering of cars; and employment. Finding concrete gender mainstreaming practices in the transport sector proved to be difficult as the initiatives that do exist are single projects and there is no co-ordination or links between them. In the end, we used a number of strategies to find examples: we asked members of the Advisory Board for examples, used the material gathered in the literature search and the Internet.

Finally, in chapter 6 we offer a set of policy guidelines.

2. Gender mainstreaming the transport sector



Frederick Charles Herrick 1923, TfL/London Transport Museum

In this chapter the conceptual understandings that are used to frame this report are presented. The first section presents central aspects of gender mainstreaming, while the second section presents transport as a sector that can be addressed by gender mainstreaming. In the last section we will focus on aspects of integrating gender and gender equality in policy making and planning in the transport sector. It should be noted that we use the term transport in different ways. We use the term to refer to transport as a sector, and therefore to an institutional field. We also use the term transport to refer to transport as the practice of transport, i.e. mobility. Often we will refer to this as mobility, but also as transport. It should be clear from the context how the term is used.

2.1 GENDER MAINSTREAMING

2.1.1 Gender and gender equality

The aim of gender mainstreaming is ‘equality’ but this is in itself an elusive and empty concept. Gender equality can be articulated in many different ways and since gender equality is a relatively new concept in relation to the transport sector, we will begin by sketching how gender equality and gender mainstreaming can be understood in relation to the transport sector. Gender equality can be seen in a much broader feminist tradition of an ‘equality versus difference’ debate. Briefly speaking, the equality approach takes the stand that sexual differences ought to be irrelevant considerations in education, employment, legislations, etc., whereas the difference approach argues that appeals on behalf of women ought to be made in terms of needs, interests and characteristics common to women as a group (Scott 1988).

The equality approach rests on the assumption that men and women are primarily similar, that women do not have any special orientation different from that of men (Billing and Alvesson 1989). It is an understanding that builds on the beliefs that sexual differences ought to be irrelevant in considerations in education, employment, legislation, etc. There is a focus on the protection of individual rights which should be applied equally to both men and women. These rights include the rights to vote, to own property, to have equal access to education and to equal employment opportunities. In the context of transport and mobility, this could be formulated as human beings having the *right* to full and equal access to transport and

mobility. This would entail participation in the decision-making, equal employment and equal access to transport (Hekman; Scott 1988).

The second approach is the difference approach. Emphasising difference means valorising the feminine instead of the masculine as a critique of the patriarchal construction of authoritative knowledge. As a feminist standpoint theory it claims that certain oppressed positions lead to a more correct understanding of reality and thus that the female standpoint is truer than the traditional male standpoint (Hawkesworth 1989; Harding 1987; Walby 1990; Alcoff 1995). In the context of transport and mobility this might be formulated as developing the transport system on women's values and transport patterns, entailing a radically different system.

The dichotomous pairing of equality and difference is, however, an impossible choice according to Scott. If one opts for equality, she argues, one is forced to accept the notion that differences are antithetical to it. But on the other hand, if one opts for difference, one admits that equality is unattainable (Scott 1988). This dichotomy puts feminists in a dilemma since they can neither give up 'difference' which Scott describes as one of feminism's most creative tools, nor can they give up 'equality' as long as they want to speak to the principles and values of political systems (Scott 1988). This dilemma is also relevant in relation to the transport sector. On the one hand, a perspective based on the equality strategy would strive to secure women's full access to transport and mobility, erasing that women may have different transport needs, practices and wishes. On the other hand, a perspective based on the difference strategy might want to secure a transport system based on women's special values, thus supporting difference.

A third approach has been introduced to solve this dilemma. Hekman calls it the *exploration of differences*, which means exploring differences between women, rather than subsuming all women under the same category. In other words, it incorporates recognition of similarities between women and men, as well as differences among women, and, indeed, among men. It deconstructs power relations by moving away from accepting the male, or rather a dominant version of masculinity as the norm. Equality in this approach needs to acknowledge the diversity of individual circumstances (Rees 2002: 559). In the context of transport and mobility, this would entail a greater awareness of the transport needs of different groups of women, as well as different groups of men, taking into account other social categories such as race, ethnicity, religion, disability, age or sexual orientation.

By presenting this feminist debate on gender equality we want to draw attention

to how different understandings of gender and equality necessarily have consequences for the kind of equality aimed for, a discussion also relevant in transport. In transport research, this debate unfolds itself in particular in relation to sustainability issues, where feminist researchers suggest that women's different transport patterns might be model for a different more sustainable transport system (see chapter 3).

By highlighting this discussion here we want to suggest that this is something that should inform and could be a starting point for debates on gender equality in transport. It is not given which position should be underpinning gender equality in transport, but the position that is taken will shape policy and infrastructural provision.

2.1.2 Gender mainstreaming: Origin and definitions

Gender mainstreaming, originally originating in development policies, entered the international arena when this new form of gendered political and policy practice was adopted by the UN at the 1995 conference on women in Beijing (Walby 1990: 453-454). Its origins lie especially in the context of feminist work within development, where different ways of including gender equity within development processes and goals have long been explored (Moser 1993; Jahan 1995; Kabeer 2003). During its development there has been a significant two-way traffic between feminist theories of gender relations and gender equality practitioners (Walby 1990: 453-454).

Since the UN conference gender mainstreaming has been endorsed in the Treaty of Amsterdam (1997) as the official policy approach to gender equality of the European Union (EU) and its member states. This followed the acceptance by the Council of Ministers in 1996 of both the general 'Mainstreaming Communication' that proposed integrating gender equality into all the actions and policies of the EU and the specific Communication on mainstreaming in the field of science policy in 1999 (Rees 2002: 555-556; Walby 1990: 454).

So, what is gender mainstreaming? Gender mainstreaming is a process that seeks to advance gender equality by revising all mainstream policy arenas. It is simultaneously intended as a way of improving the effectiveness of mainstream policies by making visible the gendered nature of assumptions, processes and outcomes (Walby 1990: 453-454).

Traditionally, gender equality policies and politics have focused on areas where it is possible to compare the disadvantaged position of women with the privileged position of men. Gender mainstreaming goes beyond this, with the ambition of sub-

jecting all policy areas to gender equality practices. Thus the advancement of gender mainstreaming has entailed the broadening of the arenas of gender equality actions (Walby 1990: 456).

Official definitions include those of the European Commission and the Council of Europe. They both suggest that it is necessary to integrate a gender dimension into the planning process. In the first instance, gender mainstreaming is about ensuring that systems and structures do not, however inadvertently, indirectly discriminate on the grounds of gender. Gender mainstreaming focuses on identifying androcentric practices that underpin an organisation and its culture as well as its policies and practices. However, gender mainstreaming can go much further than this. It can take the promotion of gender equality as the key policy goal, using a range of policy arenas to deliver this (Rees 2002: 560-561). With regard to the transport sector, gender mainstreaming can thus either be a question of integrating a gender perspective in policy and planning to improve the quality of its products, e.g. a better and more efficient transportation system, or it could be a question of using improved transportation systems to enhance gender equality, e.g. broadening women's employment possibilities by making transportation more accessible.

This dual understanding of gender mainstreaming – the integration of a gender dimension and gender equality as a key policy goal – can in Jahan's terms be labelled: *the integrationist approach* which adds women on to pre-existing programmes and projects; and *the agenda-setting approach* which is a transformative approach whereby adopting women's issues and concerns would promote a fundamental change in the mainstream. The integrationist approach builds gender issues within existing paradigms. Widening gender concerns across a broad spectrum of sectors is the key strategy within this concept. One example is the practice of designing women components in major sectoral programmes and projects. Women are fitted into as many sectors and programmes as possible, but sector and programme priorities do not change because of gender considerations. The agenda-setting approach, however, has as its key strategy the participation of women as decision-makers in determining priorities: women should participate in all development decisions, and through this process bring about a fundamental change in the existing paradigm. An example of an agenda-setting approach could be the prioritising of women's empowerment in population sector programmes (Jahan 1995; Razavi and Miller 1995). We take up this distinction in our discussion of actual gender mainstreaming practices in the transport sector.

Whereas gender mainstreaming as an integrationist approach can be said to fit

well with the above-mentioned equality approach towards gender equality and to some extent the difference approach, the aim in the transformative approach is to develop systems and structures which not only value differences within social groups but which also no longer underpin hierarchies and power relations based on gender (Rees 2002: 559).

Given that gender mainstreaming is a paradigmatic shift in approach that will take considerable time to embed, it is clearly essential that equal treatment and positive action measures continue to be developed alongside it. Some argue that all three approaches constitute gender mainstreaming. Rees (2002: 559-560), however, sees equal treatment legislation and positive action measures as both approaches to gender equality in their own right, but also as tools in the delivery of gender mainstreaming.

The focus of gender mainstreaming should be both internal – in the organisation as an employer – and external, in the ‘business’ of the organisation. Hence, for the public sector for example, gender mainstreaming is as much about the delivery of goods and services as it is about recruitment, promotion and work organisation. Frequently, mainstreaming efforts focus only on the first, the internal arrangements. Mainstreaming equality in service delivery entails considering the gender dimension of a project or policy systematically, from inception to design, implementation and review. It is, it could be argued, a new way of doing things, rather than an add-on or an extra (Rees 2002). When we discuss the transport sector below in this chapter and throughout the report we will use this distinction of the internal and the external to structure the discussion. Chapter 3 – The Gendered Transport User – will thus focus on the uses made of the transport sector, i.e. travel practices, whereas chapter 4 – The Gendered Transport Sector – will look at gendered composition of the transport sector.

2.1.3 Integrating a gender perspective

As the concept of gender mainstreaming has originated in development studies, the integration of a gender perspective in development cooperation has thus been widely studied. It is however possible to translate the experiences from this body of literature to a European context as many of the organisations and practices analysed are rooted in European organisations. Poulsen has identified three different themes within these studies. These themes are not mutually exclusive and several texts cover more than one theme. The three themes are:

- The gendered organisation
- How to mainstream a gender perspective
- Gender policy

Several texts discuss and analyse development organisations as gendered organisations in an attempt to understand why many of the efforts toward organisational change for gender equality have only had moderate success (Goetz 1997; Rao Stuart and Kelleher 1999; Hannan 2000; Macdonald, Sprenger, and Dubel 2002; Porter, Smyth, and Sweetman 1999). It is a focus on the nature of institutional values and practices and on how they embody male agency, needs and interests and thus obstruct a gender equality agenda. The argument is that organisations are gendered and that there is a relationship between gendered aspects of the organisations – the internal structures – and gender-discriminatory outcomes – the external business (Rao, Stuart, and Kelleher 1999).

The second major theme focuses on the more instrumental aspects of gender mainstreaming – how to mainstream a gender perspective (Dubel 2002; Levy 1992; Razavi and Miller 1995; Hannan 2000; Jahan 1995; Murison 2002). Ireen Dubel has synthesised the findings of many of these studies in five preconditions (Dubel 2002):

- Commitment and accountability from leadership and management at highest levels
- Explicit gender equality policy
- Located responsibility for mainstreaming
- Availability of gender expertise
- Gender resources and instruments

Political will and commitment from top management is seen as a highly important precondition to transform rhetoric on gender equality into practice. Political commitment from the highest levels sets the tone for action (Levy 1992: 6). The Council of Europe directly states that gender mainstreaming will not be successful without a strong political will (Council of Europe 1998: 21). Razavi and Miller's analysis of the mainstreaming efforts of international organisations also shows how the external pressure from supportive donors (and members of the organisation) can be a key factor in promoting a gender equality agenda.

However, according to for instance Levy political commitment is not enough; it should be translated into explicit gender equality policies. Hannan argues that the

development of an integrative approach to policy development should be prioritised as well as development of ways to integrate gender equality in other overall goals and their policies and action programmes (Hannan 2000: 365).

Razavi and Miller point out that gender as a cross-cutting theme extends into many bureaucratic divisions, thus demanding organisation-wide responsibility. But as they also note, this responsibility has rarely gone beyond the staff directly responsible for gender issues and they often do not have the authority or seniority to promote gender issues with senior management.

This issue of locating responsibility relates to the fourth of Dubel's preconditions – the availability of gender expertise. A key factor in institutionalising a gender perspective is the presence of staff members willing and able to promote a new issue and equipped with skills ranging from the more technical and analytical, to brokering and bargaining with different actors to line up support (Razavi and Miller 1995). Also Hannan points to capacity for gender mainstreaming as a professional competence required by all staff.

Gender expertise is closely linked to the availability of resources and instruments. A plethora of tool kits, handbooks, manuals, guidelines, etc., exists. Both more general ones such as for instance Kabeer, Moser, March et al., Østergaard and Council of Europe and the instruments developed within specific organisations. The Council of Europe distinguishes between analytical techniques and tools such as statistics, surveys, cost-benefit analyses, guidelines and gender impact assessment methods, educational techniques and tools such as awareness-raising, training courses, manuals and leaflets, and consultative and participatory techniques and tools such as steering groups, think tanks, databases, conferences, seminars and hearings.

With the above two perspectives the emphasis has been on the technical side of mainstreaming – the development of strategies, methodologies and instruments (Hannan 2000). The policy perspective – as the third theme – on the other hand focuses on the goal of the gender mainstreaming strategy – gender equality. Authors such as Hannan advocate for a solid conceptual base as an important prerequisite for an effective focus on gender equality within an organisation. Her point is that all too often there are unclear understandings of fundamental concepts such as 'gender' and 'equality'. This, she argues, creates confusion and limits the operationalization of policy. As we will discuss below, this lack of clarity is also a problem in gender mainstreaming the transport sector. This report aims at contributing to the clarification process by beginning to develop these conceptual pre-understandings within the area of gender, gender equality and transport.

Indeed, a number of arguments can be made for why we need to include a gender equality perspective in the transport sector:

- *The justice argument.* Women have a right to participate on an equal footing with men, both individually and as a group. This is a fundamental liberal and democratic principle. Gender mainstreaming of the transport sector is therefore important simply to secure justice between the two sexes at an individual level, just as it will help ensure justice at a societal level.
- *The resource argument.* Women have different experiences from men and this means that they can add new perspectives and new themes to the agenda. According to this argument, society should use all available competence and resources as well as possible. This is partly an economic argument. In relation to transport this could mean that it is necessary to design a transport system which improves women's access, as otherwise women's resources are wasted. For example, it is a waste of skill and competence, when educated women take work below their skill to work closer to home. When women's perspectives are not included, important resources go to waste.
- *The interests argument.* According to this argument, women's interests should be represented because they differ from those of men, and it is important that their interests are articulated. Women's interests may vary due to ethnicity, class, nationality or age, but male dominance might suppress women's interests.

One or all of these are reasons why the transport sector needs to include the gender mainstreaming perspective. Put more pointedly, one might say that gender mainstreaming can be seen as a tool in transport policy and planning, thereby securing a better functioning and more successful transport system and ensuring that the sector is able to live up to its overall goals. However, one might also see gender mainstreaming of the transport sector as a tool to secure better equality between the sexes. Here transport is subsumed and is part of the politics of equality.

2.2 THE TRANSPORT SECTOR

As made clear above, the focus of gender mainstreaming should be both internal – on the organisational issues, recruitment and work culture – and external – the output or business of the sector. In this section we will introduce the transport sector using this distinction. However, the transport sector is complex, and we also take

inspiration from Polk (2004) who suggests that gender mainstreaming must focus on three levels, namely the structural level, the individual level and the symbolic level. The institutional level can to some extent be understood as the internal of the sector whereas the individual or user level and the symbolic level more clearly refer to the external.

2.2.1 The structural level

At the structural level the transport sector is comprised by both public and private institutions and organisations responsible for providing mobility and accessibility. As such the transport sector can be seen as a large technological system (Hughes 1993; Thynell 2003), where the combined study of social and technical change allows for understanding transport as both material and immaterial. Hugh stresses “the importance of paying attention to the different but interlocking elements of physical artefacts, institutions and their environment and thereby offers an integration of technological, social, economic and political aspects” (1993: 4). Obviously, artefacts do not cope on their own, but are dependent on a framework of organised activities, here understood as organisational components. According to Thynell (2003) who uses this perspective in her analysis of the transport sector, the interplay between state actors and economic players gives the transport system its character, for example there are a number of interlinked relations such as taxes, the control of fuel influencing the character of the vehicle fleet and its uses. In the context of this report, this perspective opens up for the integrated and complex character of the sector. Adopting this approach to transport means that we cannot see transport in terms of single elements such as production of cars or the running of a bus company, but that it must be seen as a larger system involving many elements. Taking our cue from this, we will sketch out central elements of the sector.

At a public institutional level the transport sector consists of the EU Parliament, the EU directorate on transport and the national ministries and municipalities. It is in ministries and at EU level that the main directions of policy and planning for transport are developed, while it is at national and municipal levels that plans are implemented. Analyses of transport policies show how there has been a shift of emphasis from the national to the transnational at policy level (Jensen 2005). However, there is also a number of semi-public organisations such as road safety, transport councils, etc., which act in the area. These levels therefore constitute important targets for gender mainstreaming.

As a technological system, transport is heavily dependent on science and development, and it therefore also consists of both public and private research institutions which develop the often sophisticated technologies making up the transport sector. The transport sector builds upon and uses a highly developed skill and knowledge base. Gender mainstreaming must address this level, since this is the knowledge base shaping the sector.

Further, there are the many private and public organisations such as bus companies and train operators which become increasingly important with the increasing deregulation of the transport sector. This is where the user meets the organisation, and it is often at this level that gender mainstreaming practices are carried out, or might be carried out. There are many actors in the form of car companies that develop technology and sell cars. These companies lobby and influence the transport sector in many ways. Finally, various NGOs such as the anti-road lobby, environmental organisations and so on seek to influence the sector.

These are examples of some of the organisations making up the institutional level of the transport sector. Any gender mainstreaming strategy must develop an appropriate target, which in the first instance would be the public sector. However, for any organisation working in this sector, gender mainstreaming would be an appropriate element in its work. A note should be made regarding the public/private divide in relation to developing gender mainstreaming in the transport sector. Like other sectors, the transport sector is increasingly being privatised. At the same time it is a well-known experience that the private sector often is a counter-active force in relation to gender equality, while the state is a progressive force. Not surprisingly, many of the examples of gender mainstreaming in chapter 5 are carried out by public actors. It is therefore necessary to be aware of this dynamic in the development of gender mainstreaming initiatives.

2.2.2 The individual level

As we shall see in chapter 3, research on gender and transport is underdeveloped theoretically. In her work, Law suggests a perspective to understand the individual level as gendered. She suggests that gender as a category structures social relationships through the gendering of the division of labour and activities; access to resources; and the construction of subject identities. In each of these power is exercised. Attention to the gendered division of labour and activities is chiefly useful in helping to understand travel demand. As we shall see, it shows amongst other

things the complex constraints on mainly women's travel due to household responsibilities. Attention to gendered access to resources (time, money, skills, technology) shows how access to these resources will influence travel demand. Further, attention to subject identities show that there is an inter-relationship between gender, identity and travel shaping perceptions of environments. Gender is also a symbolic code by which items and activities are imbued with meaning, as we discuss separately below. For transport researchers key aspects in relation to gender are the built environment and infrastructure, which includes the organisation of land uses in space and the physical design of sites, places and routes. While the effects of the gender distinction are pervasive, they also vary historically, and in relation to place and class.

While this is not the only way to understand mobility at a user level, it does allow for different dimensions included in framing individual mobility. In developing gender mainstreaming strategies, it is central that this level is addressed to ensure equality of access. In chapter 3 we look at the research on travel patterns and everyday life, and here sophisticated understandings of the gendered difference in transport patterns are developed.

2.2.3 The symbolic level

The symbolic level involves the production of symbols and culture in a broad sense around transport and mobility. Law (1999) suggests that we use the term daily mobility to refer to the daily travels of individuals to replace notions of commuting and home-work journey. This situates the study of daily travel in a broader socio-cultural framework, where travel is not limited to the actual travelling from A to B, but also is about socio-cultural meanings involved. Mobility researchers such as Cresswell suggest that mobility is more than travels from A to B, it also entails representations of mobility ranging from film to law, literature to philosophy. These representations of mobility capture it and make sense of it through the production of meanings that are often ideological. Likewise gender is a symbolic code, imbuing items and activities with meaning. Male and female as a binary pair are widely associated in Western thought with other binaries, such as mind/body, nature/culture, as well as work/home, city/suburb and public/private. Transport technologies are also often coded in binary terms, for instance private transport/public transport, the latter category associated with the feminine.

In chapter 3 on imaginings we map the research on symbolic representations of

transport and mobility. Gender mainstreaming must also address this level, as many of our ideals of identity are often produced in a broader social cultural context.

2.3 REVIEWS OF GENDER EQUALITY PRACTISES IN TRANSPORT

Although gender mainstreaming is a relatively new concept within transportation there are studies dealing with the issue. The focus of most of the research dealing with gender equality and transport policy is to evaluate how policy-makers have applied a gender perspective in policy documents, most often as part of a gender mainstreaming strategy (Polk 2004a: 52; Polk 2004b: 43-54). Research is either snapshots of specific policy documents or it traces the historical application of gender equality in transport policies. These studies are thus primarily analyses of policy documents.

On the individual level, an analysis of policy documents should focus on how differences in women's and men's behaviour respectively, in mobility patterns and in attitudes and values towards transportation technologies, the environment and safety are included in the documents and whether the impact these gender differences could have is assessed. The structural level assesses whether gender-segregated occupations as well as women's and men's participation and influence in decision-making, planning and policy are addressed. A question policy documents should ask at this level is why transport is a male-dominated realm and what influence this has on attaining a more gender-equal transportation system. This deals with the gendered meanings connected to individual behaviour and the influence of gender-based power relations on what is considered appropriate. The question is whether policy documents address the ways that meanings and values connected to concepts such as freedom, status, power and control over technology might influence women's and men's various roles.

Within this framework Polk has analysed Swedish transport policy (Polk 2004a: 45-47; Polk). In 2001, Sweden adopted a new transport policy in which gender equality was listed as the sixth goal of the policy. The goal was formulated as a gender-equal transportation where both women's and men's travel needs are satisfied; where women and men have similar influence upon the decision-formulation and administration of the transport system; where women's and men's values receive equal consideration (Polk 2004a: 47). Polk analyses transport policy documents from before and after the sixth goal. She finds that there is no big difference in how gender equality is dealt with before and after the sixth goal. There is an increase in

the number of times women and gender equality are mentioned in the documents but no increase in the scope or depth of the analysis, she states (Polk 2004a: 52). There are several elements that recur in the policy documents. The main emphasis is put on the differences in women's and men's travel patterns and on the representation of women in the transportation sector with an emphasis on quantifiable differences. As stated above, Polk finds that explanations of these differences are ignored and oversimplified and that there is a lack of discussions of the reasons underlying how and why gender has had and still has such an influence in the transport sector. Also, a connection between gender equality and public transport is being established. This is a two-way connection. An efficient public transport system is seen as a means to attain gender equality. Similarly, gender equality (defined as increased participation of women) is considered to secure an efficient public transport system. This is also related to the link that is created between sustainable development and gender equality; an increase in women's participation will lead to better environmental policies. Permeating it all is the notion that gender equality is solely a concern for and with women.

On this background Polk finds that gender mainstreaming has not been an overly successful political strategy for attaining a more gender-equal transportation system in Sweden (Polk 2004a: 52; Polk 2004b: 43-54). The main barriers towards a successful gender mainstreaming of the Swedish transport policy is according to Polk the inefficient use of gender as analytical tool and the structural barriers where men are seen as the norm, both in the role of experts and decision-makers and as the prototype of users. To attain success Polk finds it necessary that policy-makers embrace a more analytical definition of gender that is used to formulate concrete guidelines and methods. She also advocates for more research in the area of gender and transport in order to increase the knowledge base. And lastly she promotes structural changes with regard to equal representation in decision-making and the integration of women's values, needs and interests in transport policy.

What Polk is proposing is that transport policy-makers should address a certain number of questions related to gender equality when formulating policy. They should ask how gender and transportation interact with an individual's ability to attain economic independence, to personally fulfil themselves and feel safe and secure (Polk 2004a: 44; Polk 2004b: 43-54). It is also important to question if and how the structures and institutions that make up the transportation sector support any gender-based power hierarchies or discrimination based on sex. Mainstreaming gender equality into transport policy should consider if and how transportation affects

women and men and their ability to attain gender equality goals (Polk: 44). 'Adding' women is necessary, but not sufficient. Traffic planners and policy-makers need to take into account both the influence of gender from a user perspective, as well as the influence of gender from within the organisational structures in public transportation itself (Polk 2004a: 51).

Hamilton et al. have shown some of the same problems of promoting gender equality in transport. They point to the fact that earlier research has suggested that the transport sector is gender-biased. They point among other things to the scarcity of women in central positions in policy-making and planning and the failure to incorporate the voices of women users in planning. They also highlight the lack of systematic methodologies which incorporate gender analysis in development and planning.

Clara Creed emphasises the perception of the planners who formulate policies or implement them. She argues that the planners subscribe to their own professional subculture with their own perceptions of what is 'normal' and 'obvious' and therefore are likely to plan for the needs of 'people like themselves'. Therefore, gender mainstreaming is essential to enable planners to 'make the familiar strange' to stand back and appreciate the needs of 'the other' and thus to evaluate the appropriateness of their policies for both women and men in society (Greed 2006: 267-80, 269-270).

2.3.1 Planning from a gender perspective

The problem is that there is a lack of recognition of a gender dimension in planning. Research and human experience show that women suffer disadvantage within towns that are developed by men, primarily for other men. For instance, British town planning puts great emphasis upon the importance of zoning which is the separating out of land uses, especially separating out workplaces and houses, often in the name of efficiency and public health. In contrast, many women would argue that this viewpoint makes the fundamental mistake in equating work with what is done outside the home and ignoring all the 'homemaking' and childcare work which occurs inside the home and within the local neighbourhood (Greed 2006: 267-80, 270).

Following this same perspective, much transportation planning has been based on the assumption that the male 'journey to work' during rush hour by car was the main category of journey in the urban area. Women workers often undertake intermittent, lateral journeys rather than radial journeys straight to and from the city centre. Although all these factors have been researched and recognised for more than 20 years, little change has occurred (Greed 2006: 267-80, 271).

The detailed aspects of public transport require careful gender-related scrutiny. Although women already comprise the majority of transport users, the new enthusiasm for public transport provision often appears to be orientated towards replacing the car journeys of male commuters. Gender mainstreaming is essential to facilitate the recognition and inclusion of gender considerations in the spatial policy-making process, and to overcome cultural and attitudinal bias towards women in the planning system. Many of the problems women encounter are the result of lack of consideration of women's needs at the detailed levels of planning implementation, particularly in relation to local design considerations. But, gender mainstreaming is not 'just' concerned with ramps and crèches (and other so-called women's issues). Gender affects both men and women and relates just as much to high-level strategic spatial policy issues such as city-wide land use and transport policy (Greed 2006: 267-80, 276).

A lot of literature exists that looks at what planning from a gender perspective could entail. What should transport planners take into account when planning from a gender perspective? They all point to the need to move towards a gender-aware planning process since most planning activities have been and continues to be gender-blind. They point to the need of taking different needs of men and women into account when planning and not label people as gender-neutral 'users', 'residents' or 'households' (Clifton and Dill 2006; Beuret 1991; Levy 1992: 94-109; Rakodi 1991: 541-59; Greed 2006: 267-80). Otherwise, they discuss different aspects of planning according to their main objectives or discipline.

Greed (2006: 267-80) for instance discusses whether one should be planning for or against the car. She suggests that road pricing and other restrictive traffic measures need to be scrutinised from a gender perspective, however 'worthy' or legitimate they might seem from an environmental perspective. Consideration needs to be given to the differential incomes and travel patterns of women and men, as access is increasingly related to the ability to pay, not to the social values of the journeys undertaken (Greed 2006: 267-80, 271-273). If women's work is seen as unimportant, then so will their journeys, whether by car or by public transport.

Another issue that Greed points to is local design and accessibility issues where she suggests that access provision must take into account the needs of all age groups and genders in the urban design of urban space at the local neighbourhood level where people live their lives. There is little point in providing accessible public transport networks if would-be passengers cannot access the trains and busses. Women's access to and movement within the built environment is also restricted by

aspatial, psychological factors, such as (justified) fears of street crime and lack of personal safety.

It is not only public transport that is relevant when discussing accessibility. Many women have expressed concern about the lack of gender awareness in the current urban design agenda for the revitalisation of city centres. While vast sums of money have been spent upon 'grands projects' upon 'public art', fountains and prestige buildings, many women are concerned about the lack of basic facilities such as seats, children's play areas, safety railings around water and lack of public toilets.

The accessibility issue is also taken up by writers like Beuret. Beuret discusses how good, cheap and reliable public transport is of key importance if women's choice of jobs is not to be restricted since women tend to take jobs closer to home. And Clifton and Dill point to how gender-aware urban design may remove some of the current barriers, such as safety concerns to women's mobility. Beuret also touches upon this point of safety when she stresses that walking is important for women of all ages, but that this is ignored as a means of transportation, leading to low priority for pavement repairs and enforcement of pavement parking, lack of street lighting, litter clearance and police foot patrols. Beuret refers to studies that show that women were far more likely to prioritise spending money on these issues compared to men. And as Meyer points out, a safe transportation system means something very different to women compared with men. Men focus on road safety and speed-related crashes whereas women are more concerned with personal safety and in-vehicle child restraints.

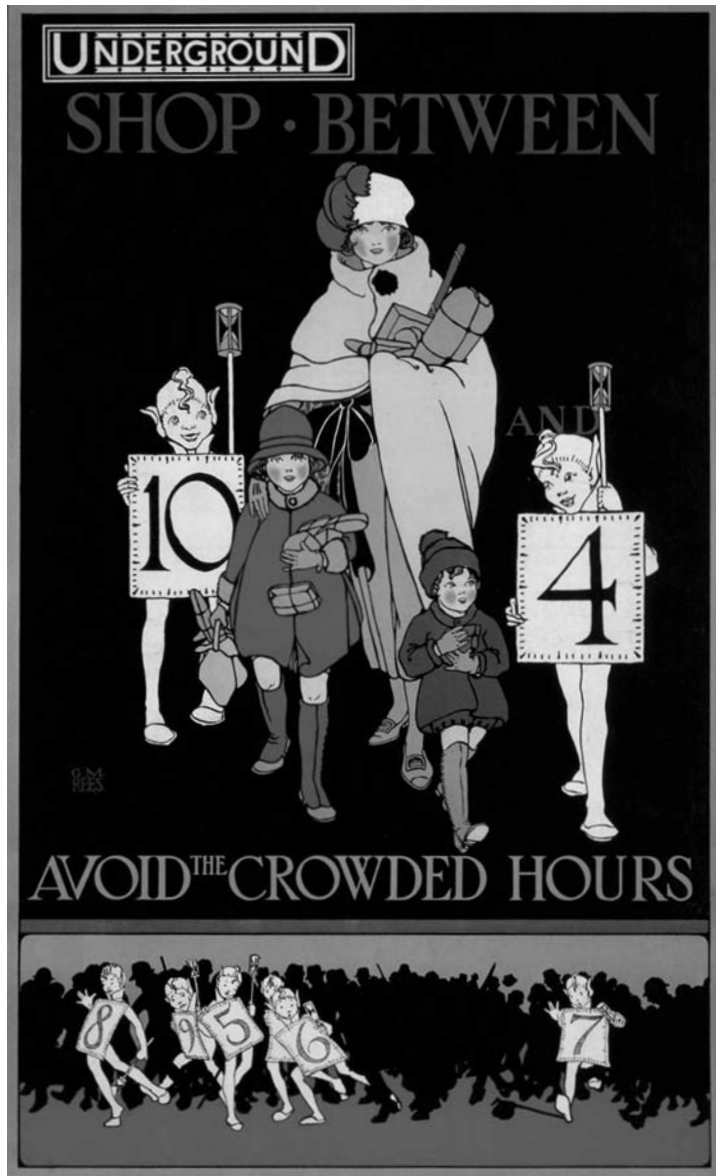
2.4.CHAPTER SUMMARY

This chapter presents the conceptual background for linking the thematic areas of transport and gender mainstreaming and discusses the existing literature that relates gender, planning and policy.

- Gender mainstreaming concerns how overall priorities in transport are made. Explicit gender equality policies in the transport sector needs to developed at national and EU level. High-level strategic policy making should include and address the issue of gender equality and sustainability simultaneously, and assess how they influence each other. It is not 'just' concerned with ramps and crèches (and other so-called women's issues), but relates just as much to high-level strategic spatial policy issues such as city-wide land-use and transport policy.

- Implementing gender mainstreaming takes political will and commitment from political leadership and top management at EU and national level and is a precondition for translating gender equality policy goals into practise.
- Traffic planners and policy makers need to incorporate the voices of women users in planning. As uses of the transport system women should systematically be included in evaluations of the transport system. This inclusion should happen both through direct consultations with women's organisations and individual users, as well as indirectly through analysis of how transportation affects women and men and their ability to attain gender equality goals. Mainstreaming gender equality into transport policy should consider if and how transportation affects women and men and their ability to attain gender equality goals.
- Political and organisational structures in the transport sector need to ensure a balanced representation of men and women as part of a commitment to gender equality. Equal representation in political decision-making needs to be insured at the highest levels in the EU and national level. Likewise both public and private transport providers need to ensure a balanced gender representation. In a context of liberalisation of the transport, it is particularly important to address how gender equality in the private sector is ensured.
- Gender expertise willing and able to promote gender mainstreaming needs to be present in the transport sector. These should be equipped with both technical and analytic skills, as well as bargaining skills. At the same time, gender expertise should be seen as a competence required by all staff, and not located to the token member of staff.
- Gender resources and tools need to be available in the transport sector. Gender mainstreaming practises has developed a plethora of practises, resources, tools, methods, and instruments, which needs to be developed and adapted in relation to the transport sector. Gender budgeting should be one such specific tool. Likewise existing gender mainstreaming initiatives in the sector need to be evaluated to learn from and build on previous experiences.

3. The Gendered Transport User



Gladys Mary Rees 1920, TfL/London Transport Museum

3.1 INTRODUCTION

The aim of the transport sector is to facilitate individual mobility.¹ Individual mobility is therefore the output of the sector, and as such any gender mainstreaming strategy must consider the gender dimension of individual mobility. A substantial body of research knowledge exists concerning the gendering of transport practices, and we have chosen to map existing knowledge to get an overview of the ways in which individual transport practices can be seen as gendered as well as some explanations for this gendering. In doing so we have not carried out any new research, but are only drawing on existing published knowledge. While there is a substantial body of research about transport and gender, interestingly, only few reviews and mappings exist. The mapping we have carried out in the form of a brief literature overview in this chapter as well as the bibliography collected and included at the end of the report is therefore in itself an independent contribution to the field. It adopts a very broad and encompassing approach to the gender and transport research in that it includes both individual, symbolic and structural levels. A brief background about the nature of gender and transport research is therefore useful.

Transport and gender do not form a uniform or clearly delimited field of research. Research into gender, transport and mobility has and is developing unevenly within different scientific disciplines and draws on different theoretical and empirical traditions. The uneven, fragmented character of this research field is reflected in the way it is institutionalised. Some research is carried out within the framework of existing transport research institutions, but research is also carried out by university researchers from many disciplines. We have found no research institutions, be it universities or public or private research centres, which have established gender and transport as a field of research and which have carried out research into this field in a prolonged period. Much of the research that exists is by single researchers who have built up experience over many years, working on the theme on and off, and it is carried out as single project research. A large part of the research has been carried out in relation to transport research institutions, and therefore in close relation to planning processes. This is not surprising, since transport research has been closely tied to planning processes from its beginning.

The chapter is divided into three parts. The first section maps research into travel patterns which form the largest part of the research. This body of research is concerned with documenting men's and women's travel patterns and forms the starting point for any gender mainstreaming strategy. The second part looks at research exploring symbolic meanings of transport and mobility in everyday life and popular

culture. This body of research is relatively small, but it highlights how transport is embedded in more general cultural understandings. Finally, the last sector suggests some of the main research issues which have been addressed in this body of research.

One good place to begin a mapping of gender and transport research is with an article by Domosh and Seager entitled 'On the Move' which is part of their book *Putting Women in Place* (2001). This article frames men and women's travel through space in a broader social, cultural and historical context. It develops a perspective of mobility combining an understanding of gender as the literal and metaphorical ways that difference is marked with an understanding of the political economy of mobility. Men and women are presumed to embody specific norms of masculinity and femininity in their movement through space, norms that may be challenged. However, these experiences of embodied movement are at the same time part of socially structuring factors that determine difference in mobility such as systems of control, privilege and hierarchy and gender, class and race. Economic status is therefore important in determining who gets around, and the ways they do so. Transportation choices therefore reflect both symbolically and real class and income differences. This is visible in for instance the difficulties of mobility that accompany poverty. The authors give examples from the U.S., where state bureaucrats discovered that a major stumbling block for getting unemployed people into jobs was that most jobs require a car, something which most poor people do not have. Almost everywhere in the world women constitute the largest group of all people in poverty. Given that mobility may be framed as a poverty issue, it is also disproportionately a women's issue. This means that restricting access to and through space is therefore one of the consistent ways to limit economic and political rights of groups. The authors explore the ways women have been kept in place, the culture of roaming and homing that has been gendered, as well as what they call 'auto-masculinity'. Auto-masculinity denotes the complex intertwining of mobility, masculinity, femininity and the assignment of proper gender roles. On the one hand, cars are closely associated with masculinity, while women's relationships to cars are historically and presently associated with anxieties. On the other hand, in terms of transportation realities women fall far behind men in driving, owning or controlling access to cars. Domosh and Seager's article fleshes out their combined perspective on real mobility, metaphorical meanings as well as social, economic and material realities with examples from all over the world as well as past and present. They give us a broad and historical outline of how mobility is structured at different levels and make a strong case for seeing transport and mobility as part of broader

societal structures, such as gender. Domosh and Seager's article is an excellent place to start for a general introduction to the issues involved in gender, transport and mobility. However, the following studies give detailed thematic and empirical insights into gendered travel practices.

3.2 TRAVEL PATTERNS

This section maps the rather substantial research which has developed around the issue of how travel patterns are gendered. This type of research developed in close association with mainstream transport research during the late 1960s as urban transport planning processes developed and were standardised and institutionalised, and statutory requirements for transport plans were introduced worldwide. Simultaneously, transport research developed and was from the start closely linked to the planning process. As feminism grew in the 1970s, some critics began to criticise the assumptions underlying conventional transport planning and research which obscured the implications of gender – and other – differences (Law 1999). Researchers such as Sandra Rosenbloom (1978) and Genevieve Giuliano (1979) laid the groundwork for this body of research which rejected 'the neutral commuter' as an assumption and began to study women's patterns of travel in urban space as distinguished from men's. This type of research developed and is the most well-established research tradition in the research on gender and transport.

The research tradition growing from the intersection of transportation planning, time-geography and feminism in the late 1970s has produced a substantial body of highly consistent and well-documented evidence showing that in general, women, particularly married women, display different work-trip patterns relative to men. Indeed, multiple studies in this tradition of research set in a variety of geographical, economic, social and cultural contexts such as Sweden, Norway, Great Britain, France, the Netherlands and Italy as well as the U.S., Canada and Australia document (see for example Camstra 1996; Cristaldi 2009; Dowling and Göllner 1997; Fagnani 1983; Fitzgerald and Michie 2001; Hjorthol 2000; Johansson-Stenman 2002; Rosenbloom 1996; Hamilton et. al. 2006) a number of ways that daily travel is gendered:

- Men consistently travel further distances than women, but women make the same or fewer trips.

- Men are more likely to travel by car, while women to a larger extent use public transport.
- Women are more likely to make multipurpose trips (i.e. home-nursery-work-shop-nursery-home rather than home-work-home) and more non-work trips.
- Further, some studies indicate that women make more suburban trips and that they tend to travel out of peak hours.
- Studies also show that men to a larger extent than women have access to cars in terms of economic capability and driving licence.
- However, importantly this situation changes over time as social relations, urban spatial structures and labour market change, so that younger women more often have a driving licence and better access to cars than older women.
- There are differences between women due to education, economic situation, geographical location, ethnicity and other background variables.

It should be noted that when we here reference the newest studies published, a more comparative and detailed analysis would be useful concerning patterns in individual European member states as well as the differences between them. No such studies exist, however. The research documents that men's and women's transport uses and transport needs are different. This overall empirical picture is of course very general, involving more complexities and also shifts, some of which we will discuss below. It poses a considerable challenge for transport policy and planning (which we will discuss further in section 6) to incorporate this insight.

3.2.1 Theoretical explanations

The challenge for research has been to explain the differences between men's and women's travel patterns, and a number of explanations have been given for these differences, drawing from a variety of concepts in the gender literature (see for example Law 1999; Hjorthol 2000; Little 1994). According to Law (1999), this research tradition led into one of the most productive areas of recent feminist urban research: the investigation of gendered spatial labour markets. This tradition drew in particular on critical-materialist perspectives in which paid and unpaid work were foregrounded, and identified social relations in the household and workplace as key mechanisms for women's position. A survey of the literature shows that the last decades of research in this tradition has produced a sizeable body of research, particularly in the form of papers and articles. However, also more substantial bodies

of work devoted to these issues have been published. In particular, we would like to mention two works, namely Grieco, Pickup and Whipp's edited volume from 1989 on *Gender, Transport and Employment* which has case studies from Europe, and Susan Hanson and Geraldine Pratt's study of Worcester in the U.S., *Gender, Work and Space* (1995).

Some of the explanations given are:

- Household responsibilities are used as an explanation for women's shorter distances to work; it is to a larger degree than men women who bear the brunt of domestic work such as caring for children, shopping and being responsible for social activities. Some researchers talk of women's time poverty (Turner and Grieco 1998) due to the disproportionate level of household tasks they are required to perform within present social structures. It is these responsibilities and the lack of time which necessitate that women work closer to home than men, but at the same time it means that they carry out many smaller journeys related to the household.
- Position in the labour market is a second type of explanation given for women's different travel patterns. Studies indicate that the length of the journey varies with occupational status, i.e. that high-status workers travel further distances than low-status workers, and that these differences also hold for women (e.g. Hanson and Pratt 1988). At the same time there tend to be significant differences between men and women in the same occupational groups (e.g. Hanson and Johnston 1985). However, several studies indicate that well-educated women are well-integrated within the labour force and have more regard for the content of the job (Hjorthol 2000). Such women travel further to find a satisfactory and well-paid job than less well-educated women do. Education, occupation and income are therefore factors that can contribute to an explanation of women and men's travel patterns.
- Structural-spatial factors are a third type of explanation for different travel patterns. In this type of explanation, the length of journey to work has been said to be closely related to the material structures of the city in the form of buildings and infrastructure which form an important part of the conditions for travel patterns. Thus, the spatial structuring of men's and women's employment opportunities as well as the spatial structuring of housing and employment lead to differential travel patterns. Large-scale empirical studies suggest that differences do exist between men and women in the ways that urban structure influences travel behaviour. Se-

veral studies show that men choose among job opportunities all over a metropolitan area, whereas women to a larger extent confine their choices of workplace to those available locally (Hjorthol 1998; Næss and Jensen 2005). Indeed, extensive empirical research carried out by Næss and colleagues in different urban settings in Norway and Denmark (and more recently, China) suggests that in suburban areas there is a clear tendency that women find it necessary to choose among a narrower range of job opportunities and leisure facilities than their male counterparts. In contrast, the study suggests that in the present urban structure of the Copenhagen Metropolitan Area as well as in the Chinese Hangzhou urban region women's accessibility is more equal to men's if they live in the inner districts.

- A fourth type of explanation brought forward is the differential access to means of transport which the two genders have. Traditionally, men have had better access to cars than women, and they have used it on work trips. Lack of necessary means of transportation might restrict women's access to the labour market as well as increase their dependence on public transport.

- Some studies point to the need for going beyond socio-economic and structural explanations and look at socialisation and psychological gender differences (Hamilton, Jenkins and Gregory 1989). Such explanations suggest that the socialisation of gender-differentiated psychological differences begins at birth and is an ongoing process. Thus, men and women play different roles and occupy different positions in the social structure, meaning that there is a qualitative difference between men and women at the level of consciousness. Following this, it may be suggested that men are socialised into a greater interest for things technical such as the motorcar. However, newer research drawing on social-constructivist theories of gender suggests that the relationship between women and cars can be constructed in many different ways (Siren 2004).

These explanations are refined and tested in the literature and, as we shall see below, do not hold for all groups of women. Methodologically, most studies involved quantitative analyses of large-scale databases which allow for the effects of different variables to be examined. A more general comment should be made about the underlying approach of these studies. The studies have had a clear focus on the empirical detailing of travel patterns in everyday life. In doing so, they have contributed with detailed descriptions of the gendered travel patterns and documented how

such travels are gendered, thereby providing a background for understanding transport in gendered terms. Law has argued that this approach restricts the realm of the subject area to behavioural differences. As we shall see in other areas, attempts are made to draw on theories which allow for cultural and symbolic meanings and which draw on other types of methodologies.

In this literature, there has been a marked focus on the journey to work-travel. This has been so strong that Law (1999) calls this research tradition for the 'journey to work-strand'. Empirical research into other types of travel exists in this tradition, for example the gendered aspect of migration (Bonney and Love 1991; Fagnani 1993), i.e. research exploring when and why couples make job-related and other migration, and how it affects both the husband and the wife. However, one could suggest that focusing on other types of travel could be fruitful, for example leisure travel. It could be argued that the focus on the 'journey-to-work' travel is linked to the focus in mainstream transport research and planning on work and production-related travel. This is linked to the development of Western urbanism and the spatial distinction between public and private. Following this, the concern of transport planning has been public and production-related transport, while travel linked to the household such as leisure and care-related travel remains underexplored.

3.2.2 Differences between women

It is an important point in the literature that women do not form a homogeneous group. Empirically, many studies focus on women with children, but many studies note and point out the differences between women. This research is therefore beginning to incorporate a 'difference' perspective. Rosenbloom (Rosenbloom 1993) stresses this perspective and suggests the need for using a lifecycle perspective to understand women's travel patterns. She argues that without understanding women's position and lifecycle we cannot understand the transport needs of women. Likewise a recent European transport report stresses that 'women do not form a homogeneous group' (Hamilton et. al. 2006). Following this perspective, we will here look at some groups of women which have been singled out and given particular attention in the literature.

- *Women with children – married and single.* Studies on women's travel patterns suggest the importance of women's domestic responsibilities for their travel patterns, and an important focus is married/single women with children. One example of this

is Rosenbloom's analysis from 1993 from the U.S. in which she shows that married women have very different travel patterns than comparable men, and that single parents have different patterns than their married counterparts (Rosenbloom 208-42). Women make transportation and other decisions in order to successfully juggle a number of employment, childcare and household responsibilities. This is also applicable in a Dutch context where working mothers play a significant role in their children's travel, even if non-car options are safe and available (Rosenbloom 1993). Both single and married women have transportation problems that can be differentiated from the problems faced by men and those who are not parents. Embedded in women's travel patterns are the transportation problems of their children. This means that if women continue to bear a disproportionate share of chauffeuring and other responsibilities, then travel differences will not disappear. Single mothers in particular are a very vulnerable group, even if they have moderate incomes. They face disproportionate pressure to alter their activities and travel patterns, because they are economically disadvantaged and because they have less assistance in balancing employment with household and childcare responsibilities. This could also leave children of single-household families at risk if they fail to avail themselves of societal and cultural resources in an ever-dispersing society.

- *Women with high and low income.* This literature documents that income plays an important role for one's travel patterns. For example, the recent report on gendered travel patterns in Europe documents that the lower income of a household, the more probable it is that women within that household will experience greater transport deprivations as compared to men (Hamilton et. al. 2006: 2-74). In the empirical studies, however, it varies how economic resources are defined. This difference has been assessed as the difference between professional active women vs. those without a job, as type of job, as single women vs. married women, and also as living in a specific area (Hanson and Pratt 1995). The deprivation in terms of travel that women from low-income households experience may be caused by time constraints and inferior means of transport modes. This may constrain job search patterns and have significant negative impact upon the employment opportunities available.

- *Elderly women.* Elderly women form a distinct group facing mobility difficulties, since they will at some point begin to reduce their driving, lowering their mobility. Particularly elderly women living alone will be vulnerable, having few alternatives to driving. There is an emerging literature on elderly women's mobility exploring the needs, patterns and practices of elderly women (Hakamies-Blomqvist and Siren

2003; Siren, Heikkinen, and Hakamies-Blomqvist 2001; Burkhardt, Berger, and McGavock 1996; Cutler and Coward 1992). In a society with an aging population where women comprise a larger part of that population and where social life is increasingly spatially dispersed, the question concerning how this group can maintain its mobility becomes relevant. In relation to the elderly, ready availability of transportation can enhance their independence, expand their social range of participation and interaction and provide access to services. In relation to elderly women, one theme that has been taken up is the tendency of elderly women to give up driving to a greater extent than their male counterparts. Finnish research suggests that this may not be explained in terms of gender, but more in terms of their driving experience and history (Hakamies-Blomqvist and Siren 2002).

· *Ethnicity and/or race.* We have not found any European research dealing with the role that ethnic and racial background might have for travel patterns (although see Priya Uteng forthcoming with a Norwegian study focusing on immigrants). Indeed, issues of social exclusion/inclusion have only recently emerged in transport-related discourse. Despite the apparent absence of a transport policy framework for social inclusion/exclusion there has been some movement towards a greater understanding of the social aspects of transport in the research sphere focusing on ethnicity (see Raje, 2004). Empirical research from the U.S. suggests that ethnicity and/or race might matter in terms of travel patterns (McLafferty and Preston 1997; Taylor and Mauch 1996). These studies are not conclusive, but suggest that travel patterns may be different for women and men with different ethnic origin. One study from the San Francisco Bay Area indicates that while women are overall responsible for child-serving and domestic-related travel, race and ethnicity also play a role. Thus, the journey to work trips are longer amongst whites than non-whites, while the gender difference for all trips does not vary in terms of race or ethnicity. A study from the New York metropolitan region shows that the presence of children leads to shorter commuting times for white women, but not for African American and Latino women (McLafferty and Preston 1997: 192-212). The researchers suggest that this may be because there is a shortage of jobs near these women's residential areas forcing them to longer commuting times, but it may also be because they tend to live in extended families with relatives present to share the domestic burden. Another important finding in this study is that in all ethnic and racial groups married men commute longer than unmarried men, while marriage does not have any impact on women's commuting time. These studies indicate that race and ethnicity do play a role with regard to commuting patterns, but they only begin to give more theoretic-

tically informed explanations for this. There is a need for work that thematises these issues in a European context as well as develops theoretically informed understandings of the role of ethnicity. Importantly, we have found no studies or data that can help us include ethnicity and racial in a mapping of travel patterns. To be able to understand the role of ethnicity and race for travel patterns in a European context, a necessary first step is to map travel patterns in terms of ethnicity and race, and secondly to develop concepts and theories that may enable us to understand the role of ethnicity for travel patterns.

- *Rural/urban.* One other set of distinctions between women are the differences in travel patterns and access for people living in rural and urban areas. This difference has been an issue in transportation research, but we have found only one empirical study which thematises this from a gender perspective. In the recent report *Women and Transport* (Hamilton et. al. 2006), the distinction between urban and rural is suggested and explored empirically. These data clearly show that women in rural areas have a higher level of driving licence holding than in any other area of the U.K. This could suggest the low availability of public transport in rural areas. This does suggest the difference between living in rural vs. urban areas, and that there is a need for researching the differences between travel patterns for women living in rural and urban areas. It also needs to be related to the geographical and national context. There will be a big difference between living in a rural area in Denmark and in the Netherlands respectively, as opposed to living in rural areas in Spain or Italy. Further, this issue may be important in the new EU member states. In these member states, rural areas to a large degree lack behind in socio-economic development, and this will affect men and women differently.

- *Societal changes in gender relations and their effect on travel patterns.* Most of the empirical research in this tradition is 'snapshot', i.e. they consider the current situation of travel patterns. Some make reference to the historical context of how gendered travel patterns have changed over the last 50 years, pointing out that previously women did not work and therefore had very local travel patterns, while this has changed. Few studies engage in a study of travel patterns in relation to broader societal changes, however clearly the current changes in gender relation, welfare provisions, labour market and technology will affect travel patterns. Rosenbloom takes up the issue of increasing convergence in men's and women's travel patterns (Rosenbloom 2004). Where men and women for a long time have had different patterns, there seems to be an increasing convergence at the aggregate level. These shifts have to do with broader societal trends such as increasing employment amongst women

which means that their travel patterns have come to resemble men's – increased licensing, dependence on a car, trip-making, miles travelled and driven and commuting. Also as men and women have more balanced household responsibilities this may cause their travel patterns to converge. However, in a detailed exploration of the U.S. developments, Rosenbloom ends up suggesting that although there are broad and overall shifts in gender relations, women's travel patterns are likely to continue to diverge substantially from men's in a variety of areas, even as they converge on some aggregate measures. Rosenbloom's analysis suggests that the underlying courses (such as women's employment patterns and household responsibilities) are not likely to change rapidly and occur because women as a subgroup continue to have specific needs and patterns.

Rosenbloom's analysis is based on data from the U.S. However, it would be relevant to carry out similar analyses in a European context. It would then be important to make more explicit links between travel patterns and the socio-economic regimes of the areas studied. For example, it would be important to relate national travel patterns to differences between welfare regimes characterising Northern, Southern and Eastern Europe that shape men's and women's domestic patterns, household roles, employment and economic conditions. Does the welfare regime have an impact on the travel situation of men and women?

3.2.3 Different means of transport

These different subgroups of women have been distinguished by well-known distinctions such as ethnicity, age, space and socio-economic position, and empirical research shows how these factors impinge on travel patterns. Another perspective is to focus on travel patterns from the perspective of means of transport. An example of this perspective is a study of the deregulation of buses in Yorkshire, U.K. (Hamilton, Jenkins, and Gregory 1991). This study took the change in bus services following the deregulation as its starting point. This perspective enables a different kind of perspective into travel patterns. It is also the only study of its kind in our literature which takes the shifting regulation of public transport as its starting point. In the context of increasing liberalisation of public transport throughout Europe, this suggests an important research avenue also for gender and transport survey methodologies and large-scale data research.

3.2.4 Survey methodologies and large-scale data

Methodologically, this type of research uses survey-based methodologies and therefore quantitative data. This means that men and women's differential travel patterns are well-documented on a general level through various research projects carried out during the last three decades. However, there are also some challenges for research using these types of methodologies.

These studies rely on either data collected by the research team and tailored to the requirements of the research project, or they draw on available data in the form of national travel surveys. When methodology is developed by the individual research project, obviously the survey can be tailored to suit the requirements of the individual research project. Given that this kind of research depends on large-scale surveys which are costly and time-consuming to carry out, often it is useful to draw on and use already existing data. However, the possibilities for doing so vary according to national context. A recent report (Hamilton et. al. 2006) has surveyed the available travel data across Europe and has highlighted some of the difficulties involved. The travel data available is very heterogeneous. Many countries carry out national travel surveys. Some countries list these data as part of a national census, and for a number of countries no national surveys are carried out on travel patterns. Here it is possible to include gender as part of the analysis. However, the lack of a shared framework makes full comparative studies difficult.

Alternative means of accessing data concerning gendered travel patterns in order to carry out comparative studies have been suggested, and one suggestion at a European level is the European harmonised Time Use Survey (See Hamilton et. al. 2006). This survey has a common set of guidelines. It is gender-differentiated and provides an opportunity to look at gendered travel patterns in different European countries. One major shortcoming of this survey in relation to travel patterns is that it focuses on time, while space is not a parameter.

Developing a full picture of daily travel patterns throughout Europe, or carrying out comparative studies (for instances between Northern, Southern and Eastern Europe) would pose a further challenge. Travel surveys are not part of the European Statistical system, and this means according to Eurostat's newsletter that the data from the national travel surveys are not comparable in their current form. The information collected and the definitions used are not common across countries. For example, short walking trips are not always included. The year of data collection varies by country as well as indicators of travel. For countries without a history of national travel surveys, such as many of the new member states, there is only very

limited access to travel data. All this makes comparative analysis difficult. This means that in many EU countries, researchers will find it difficult and impossible to use this data to carry out research on gender and travel patterns, let alone carry out comparative studies. It will be difficult in many EU countries, particularly the new ones, to map gendered travel patterns, let alone monitor these patterns as they shift and change over time.

It is therefore a challenge for the European Statistical System to develop methodologies for travel surveys which can be used across Europe and which would make available accessible data for researchers wanting to map gendered travel patterns across space and time, as well as give policy-makers a picture of travel patterns as a background for developing gender-aware transport policy.

The study of gendered travel patterns use survey-based methodologies which attend to descriptions and analyses of gender difference in travel patterns (such as trip distance, trip purpose, type of transport, etc.). This has according to Law (1999) restricted the subject area to behavioural differences. However, there are also examples of research which attend to daily travel using socio-cultural perspectives and qualitative methodologies and which are concerned to understand how such travel becomes meaningful in everyday life. This work draws on theories which suggest that daily travel is not just about getting from A to B, but that such travel is also embodied, experienced and made meaningful through social and cultural life. These studies suggest some new directions for research, and we will give a short discussion of several studies as they in different ways suggest new and innovative directions for transport research.

3.3 SOCIO-CULTURAL PERSPECTIVES ON DAILY TRAVEL

3.3.1 Gendered meanings, identities and everyday lives

Following her critique of the narrow and one-dimensional concept of gender in transport studies focusing on gendered variations in behaviour rather than gendered meaning and identities, Law (2002) develops a multi-stranded approach to the issue of transport and gender. This consists of a three-part concept of gender as a pattern of social relations, a cultural system of meaning and a component of personal identity. In developing this approach she draws on newer gender theory such as Scott and Butler. This approach is used in a concrete case, a neighbourhood of

Dunedin in the early decades (1920-1960) of the previous century, to see how practice of daily mobility constitutes gender. This period is particularly interesting because it is in these decades that an extensive and widely-used public transport system slowly became supplanted by private means of transport such as the car. As new transport technologies were taken up, they offered opportunity for new social practices, cultural meanings and embodied subjectivities. Her data consist of 60 oral histories collected amongst older men and women. Also other geographers with an interest in daily mobility have begun to use such methods (Pooley and Turnbull 2000 on life histories), and this can be seen as a new and innovative approach to gain knowledge about transport. It enables a historical perspective as well as a focus on individual and subjective meanings, perceptions and experiences. While Law uses her approach on historical data, it would be equally possible to use it on contemporary data.

Other researchers approach transport from the perspective of everyday life, and this can be seen as an approach that is characteristic of a large proportion of the transport research that has been initiated during the last decade in Scandinavia. Researchers have looked at transport in terms of everyday meanings, routines, experiences, negotiations and norms set in everyday life (see for example Aune 1999; Hjorthol 1998; Jensen 2003; Godskesen 2001; Oldrup 2006; Uth 2001). Indeed, it has been suggested that the everyday perspective is particularly characteristic of Scandinavian transport and mobility research (Larsen, Lassen and Oldrup 2006).

One focus in this research is on time. Time and space can be seen as significant dimensions of the everyday journey and thus as central to how people experience, perceive and order their everyday journeys. At the same time, the categories of time and space are gendered. Gaining more knowledge about time and space aspects of journeys and how they are gendered is important in transport research. Within transport planning there is a tradition for evaluating projects in terms of time gains and cost-benefit analysis. In calculating the value of time, planners see time as an individual resource. However, if men and women have different perceptions of time, such estimations become misleading. Hjorthol (2001) gives a comprehensive discussion of concepts of time and relates them to everyday travel. She suggests that the temporal aspects of journeys are both quantitative and qualitative, and that the perception of time must be related to the time order in the society in which they exist. Further, it is possible to talk of different time orders in the same society, one for consumption, work and households. If the society has one main dominant time order, it will benefit some activities and disadvantage others. In her empirical study,

Hjorthol seeks to find out how what perceptions of time are significant in relation to everyday travel, and how different groups of men and women perceive these aspects. In exploring these issues empirically, she draws on survey data.

Going beyond transport research, urban researchers have developed a distinctive approach to understanding movement and travel through space which is phenomenologically inspired. These contributions have developed unconnected to transport research, but they do share the same theoretical inspirations and roots as transport researchers working with everyday life perspectives. The phenomenologically inspired approach is concerned with developing new theoretical and empirical insights into the relations between space and body, suggesting that we must understand these relations from the point of view of embodied, sensuous and affective subjects. As such these studies are placed within the broader theoretical discussions of the nature of social life in the context of globalisation, providing a distinct contribution to these discussions.

Kirsten Simonsen has studied different groups' movement through the city of Copenhagen from the point of view of inhabitants with different gender, class and ethnicity. She develops a sophisticated theoretical framework that opens up for diversity in the ways that inhabitants use and construct the city; with their bodies, socially, materially and symbolically. In doing so she suggests that many discussions about the effect of globalisation on the city are too deterministic in their view of the city and its spatio-temporal formations. Following this, she presents empirical work that investigates practical and narrative work involved in knowing and doing the city. Simonsen's contribution is that she suggests potential theoretical frames for understanding travel that link practices and experiences to broader trends in social and cultural life. This suggests that travel and mobility are not only a matter of choice and behaviour, but deeply embedded in societal values and perceptions.

The second example is Povrzanovic Frykman's (2003) analysis of a holiday journey with a bus from Sweden to Croatia. This is a study concerned with bodily experiences and community relations amongst Croatians, and it is related to broader theoretical discussions about transnationalism, suggesting that transnationalism must be seen from below. Frykman develops a phenomenological approach focusing on the embodied experiences of travelling by bus through Europe as well as the senses of communal feelings arising on the way. When we have chosen to include her study here, it is partly because of her theoretical and methodological approach which presents a fascinating study of what is involved in terms of embodied experiences, which could be an inspiration for analysis of other forms of travel.

However, her focus on transnational travel, here in the form of visits to other countries, suggests that transport research should address issues of transnationalism. Increasingly, travel is not only local, but also regional and transnational.

These studies discussed in this section are all examples of studies that raise new and innovative questions, approaches and methodologies in relation to transport and gender. They expand the boundaries for how we can understand and research such travel and show us how such travel is deeply entrenched in culture, identity and body. In doing so, they suggest new directions and questions for transport research. However, it is an open question how these challenges can be taken up and developed within transport research.

3.3.2 Gender and transport technologies

This section deals with research that has emerged at the intersection of transport as a technological artefact and gender. Seeing transport as a technological artefact means that a technology is not seen as determining use and cultural value, but instead use and value are seen as shaped through social and cultural processes that are also gendered. These processes take place in different fields such as production, design, use and marketing.

A number of studies explore how cultural values, norms and conventions associated with transport technologies are gendered. There is a marked focus on auto-mobility in this research, although examples also exist of other means of transport (for example Lloyd 2000). This perspective has been taken up both within established transportation research, but has also inspired researchers from other disciplines such as the arts and humanities. Further, this perspective on gender and transport has inspired more broadly and appears in research dealing with for example sustainability (Hjorthol 1999), transport as labour market (Nehls 2004) and cultural representations (Hubak 1993). In this section we deal primarily with research which specifically looks at how transport technology is gendered.

The gendering of cars

Researchers from the humanities have explored the links between gender and transport technologies, notably cars, in more detail (Berger 1986; Lloyd 2000; Scharff 1992; 1999). One important contribution is a book by the historian Virginia Scharff (1992) who explored how values, norms and conventions about gender collided with the rise of the automobile in the early part of the 20th century in the

U.S. She draws on a wealth of written documents from archives, particularly newspapers, magazines, political debates and so on. She shows how in the early history of the automobile it became closely connected to a conservative gender ideology. She shows how in the early decades of the century, 'driver' came to mean male, and how the prospect of women driving disturbed many observers who worried mobile women would be beyond control. While class, status, age, location, occupation, race and ethnicity profoundly affected people's access to and control over cars, Scharff shows how gender outdistanced these other factors about who could and should use cars. According to popular mythology, men enjoy a sympathetic relation with cars, mastering them as adept mechanics, rising to the challenge of driving in poor physical conditions and deftly negotiating heavy traffic. On the other hand, women have typically appeared as passive figures, seated next to driving husbands or boyfriends, or draped over cars as ornaments. They have often been depicted as incompetent behind the wheel, ignorant of mechanical problems, terrified of motoring in bad conditions and timid in crowded streets. The gender system was hierarchical, and what was seen as feminine seemed trivial or even dangerous, and this had direct consequences for technological development. It meant that car makers were uneasy about qualities associated with femininity, such as convenience, safety, comfort and style, and their ideas about gender affected the technological development of cars. Scharff gives several examples of how technological developments which would benefit both men and women were slowed down with reference to the gender system. References to women's demands and capabilities sometimes served as a way of obscuring men's and women's common wishes.

However, she also shows how women influenced the development of automotive technology and shaped the car culture as they took up driving after World War I. At first the woman driver came to epitomise the new American consumer culture, dedicated to fun, family affluence and display, and was seen as a morally suspect clientele more concerned with leisure than labour. However, women's venture into mobility was soon a return to the familiar; the car provided in women's hands a means of mediating new distances. The car extended women's geographical sphere, but did little to reduce their domestic responsibilities. In short, Scharff charts through detailed empirical analysis the terrain where women breach traditional gender boundaries by taking up the automobile and gaining access to the public realm, thereby challenging the traditional view that women belong in the home. At the same time she shows how home was always within range for the women drivers, and how their legitimacy as drivers was ridiculed. Interestingly, she demonstrates how

the still heard remarks about women and driving became embedded in the early history of auto-mobility. Berger (1986) explores this further and argues that the folklore concerning women and driving only emerged when middleclass women took up driving. It developed as a way of keeping women in place in a context where women at the wheel posed a threat to long-established ideals and practices. Finally she argues that 'drivers' are imagined as he-men who are solely concerned with speed and display, ignoring issues such as safety, convenience and cleanliness which are associated with femininity. This means, she says, that we will hesitate to adopt features deemed feminine, denigrating innovations where they might prove valuable. In conclusion she suggests that we have to develop a more pluralistic view of who uses cars, how and why.

Cars and the public-private sphere

While Scharff focuses on gendered norms around the use of cars, Wachs looks at how the use of the car is closely intertwined with the persistence of two separate spheres, the public and the private which are also gendered (Wachs 1991). He suggests that the difference between current gendered travel patterns where men travel more and longer than women has a historical base and is closely connected to the evolution of separate spheres that delineate the social responsibilities of men and women respectively. The male sphere has traditionally been the workplace, while women's has been the home. Transportation systems were built with the purpose of separating those functional spheres in geographic space. This was for instance the case when new transit systems were built at the end of 19th century and the suburbanisation of middle- and upper-class residences ensued. As the car became the dominant mode of transport in the 1920s, the idea of separate spheres was extended to that vehicle, and gendered social conventions regarding the proper use of cars developed in parallel. These uses differed between men and women, and sex-based stereotypes were used to reinforce the division between men's and women's worlds. Many of these role definitions still exist, and women's work is still defined within the limits associated with their special domain. Wachs' analysis shows how transportation systems are closely intertwined with the gendering of separate spheres – in turn closely linked to gender. While Wachs as well as gender researchers point out the many ways in which women and men criss-cross, transgress and live between these gendered spheres, at the same time the materiality of the transportation system is not easily subverted.

Different means of transport

There are also of historical research of the gender dimensions of transport into other means of transport. One study explores the meanings surrounding the first female aviators in the beginning of the 1920s and 1930s, and shows some of the ambivalences involved with in being a female aviator (Lloyd 2000). This analysis suggests that the discourses on the relationship between women and technology implicated in the figure of the aviatrix were processes of power. These political technologies work through the highly visible representation of women as modern, at the same time that as women were being excluded from the power relations embedded in the technological complex of aviation, and of modernity more generally. This analysis argues that rather than being an utopian figure celebrating women's entrance into modernity, the early female aviatrix were was seen as a subject lacking the required mastery of the machine to be a successful pilot. By the mid-1930s, the utopian image of the 'lone girl flyer' had declined, and she instead became part of a circuit of technology-out-of-control. In these discourses the aviatrix was produced through tensions in discourses on women's mobility, between a feminism imagined as a spatial practice of liberation and a Western geographic imagination based on the domination of territory. For the aviatrix, participation in an international modernity, signified by her act of travelling as a single womenwoman, was shot through with contradictions.

There are also a few historical examples of public transport. Schmucki analyses the gender relations in urban public transport, especially the trams and thereby she provides one of the very few studies centring on public transport. Tram passengers changed from being male to female, as men began to use cars in the period from the 1950s and onwards. She shows how in the same period male and female bodies travelling were shaped differently according to role expectations on and around tram cars. For example, it was regarded as no matter for women in skirts to jump on or off the tram. With regard to the public sphere, transport systems in cities have always been part of the public sphere, and as such masculine. However, Schmucki shows how the interior of a tram car is neither public nor private. Women and men were not segregated here, but it was a meeting place outside the traditional spheres. Thus, it is an interesting place to study the construction of gender.

This research on the gendering of transport technologies clearly shows the great value of detailed empirical study of the ways in which transport technologies are closely interwoven with gender. Scharff's more long-ranging study demonstrates how gendered values, conventions and norms of auto-mobility are reproduced and

contested over time both by users, producers and ‘commentators’ and deeply embedded in what it means to use a car. This has consequences for the design and technological development of the car, and she demonstrates how the car as a technology is fundamentally shaped by gender. While her study is historical, it suggests a fruitful way forward.

Certainly there is a scope for developing a research agenda that addresses the social and cultural shaping of transport technologies past and present and how they might be gendered. Sociologists, geographers and others argue that transport technologies as well as the use of new information and communication technologies are transforming social life, through spatial extensifications and temporal compressions. However, in this new terrain of mobility we know very little of how cultural values, norms and conventions associated with different transport technologies might be gendered. Here it would be interesting to focus on cars, but certainly also on other means of transport such as the use of bicycles, public transport and planes. Such studies could be used to inform the development of transport technologies, and gender as an analytical perspective could be integrated explicitly into development processes. Indeed, as we shall see in part 5 on ‘Examples of practise’, car companies do indeed incorporate such knowledge into the development of new cars, designing cars ‘for women’ that are easy to manoeuvre as well as having a more curvy look.

3.3.3 Imaginations: popular culture, art and aesthetics

The research we have looked at in this section focuses primarily on the meanings, perceptions and norms involved in the use of transport, mainly cars. However, transport technologies not only gain meaning through everyday use, but also involve cultural imaginations in the realm of popular culture, mass media and art. In this section, we look at research that uses representations of transport technologies to explore meanings, values and norms involved in their use. A number of studies use representations to explore the symbolic meaning-making of the gendered nature of transport technologies.

Visual culture of transport

Since their beginning, transport technologies have been closely associated with visual imagery, and a wealth of visual material depicting transport technologies exists for any researcher interested in transport technologies. Several studies use advertisements to explore gendered cultural meanings involved in the use of transport

(Brandth 1995; Harrington 2004; Hubak 1993; Oldrup 2006). In these studies, particularly car advertisements have been used, but there is also an example of the use of train advertisements. One study from 1992 is an analysis of visual images in car adverts in Norway (Hubak 1993). It uses the concepts of 'script' and 'domesticating' to analyse the images – concepts which have their roots in the literature on the sociological understanding of technology. The analysis focuses on adverts depicting normal cars and gives as examples different representations of men and women. The analysis shows that men and women take up different roles as car-owners and drivers. Although women are shown as independent, at the same time a more or less traditional gender relationship is represented. As drivers, women are presented as helpless, lacking in technical knowledge. Depictions of male drivers highlight men's need to control. While women are depicted as estranged to the car and its technical sides, for men the car is closely linked to the fascination of technology through speed and danger, the point being that they are in control. For women the car is about usefulness, safety and the adaptation of speed. Women are taught passive control. Further, men are more often represented as drivers and as active. Another study analyses the representations of gendered mobility in car adverts from 2000 (Oldrup 2006). This study is a qualitative analysis of mobility and is set in the context of discussions about mobilities in the social sciences. In this study, the focus is on how space, time and gendered bodies are represented. The study shows that both men and women are depicted as mobile. However, men are represented as moving with speed and control, while women's movement is associated with flight from everyday life, pleasure and care. Further, the analysis shows how men are allowed direct unconscious identification with the experience of speed, while women are dissociated from such unconscious identification and instead made aware of their fixed position in space through the visual language used. There are also historical examples drawing on the visual culture of transport.

These visual studies all show how such materials in different ways shape how we understand and perceive transport technologies as well as gender. They show how gender is embedded in perceptions and meaning-making about these technologies. Perhaps not surprisingly, they show how gendered meanings regarding transport technologies revolve around masculinity, speed and fascination of technology on the one hand, and femininity, care, speed adaptation and safety on the other. The historical studies give a more complex insight into this gender dichotomy pointing to ambiguities.

'On the road': the road movie genre

One film and literature genre has been closely associated with cars, men and movement, namely the road movie. Perhaps not surprisingly, this genre has been explored and discussed by a number of researchers (Bjuström and Rudberg 1996; Enevold 2004; McDowell 1996). The road movie genre emerged during the 1950s and 1960s as a distinct genre which has inspired writers and filmmakers ever since. It can be seen as one out many travel genres, but what makes it relevant in this context is the auto-mobile which is central. The genre has developed a whole visual language and aesthetic which shapes how we understand travelling 'on the road'. The road genre involves a particular aesthetic where driving is presented in wide, largely unpopulated spaces with good quality highways. These films show the car as a source of freedom, allowing one to speed along empty freeways, conveying a feeling of leaving the constraints of one's old life behind and escaping into a new and changing world. There are many examples of such films, such as *Easy Rider* (1969), *Fear and Loathing in Las Vegas* (1973) and *Thelma and Louise* (1993). The genre has been interrogated from a gender perspective by researchers from different parts of the social sciences and humanities. Here we want to give the example of youth researchers who have taken up road movies as a way of exploring broader changes in masculinity and femininity (Bjurström and Rudberg 1996). They show how portrayals of the young male rebel from the 1950s and onwards can be read as different constructions of the individualised masculinity. They show how girls in the same period both eroticised as well as identified with the male rebel/outsider, and this seems to have involved her own subsequent individualisation. Finally, they look at recent road movies portraying two-gendered outsider couples. These couples seem to be both a paradoxical mixture of stereotypical genderisation on the one hand and an almost pre-gender fusion on the other. This leads them to suggest how the narrative of the male heart is turning into a story of youngsters who regardless of gender are wild at heart. Enevold is based in literature studies and she explores what happens to feminine identity and to the road movie genre when women take to the road (2003). She argues that in the traditional genre of the road movie road travel is a male identity project, while women have been constituted in a place-bound domesticity. She analyses a number of newer films and novels that put women behind the wheel and explores how female writers re-interpret the masculine, mobile subject which has been the hallmark of this tradition. In her articles, she shows how the female, mobile subjects of these novels reconstruct the traditional road movie subject through different practices such

as having technical skills, being active agents and with an emphasis on female pleasure. Her conclusion is that women have redefined the masculine, mobile subject and now take mobility for granted. Indeed, such feminine road movies can be seen as a form of feminism.

Literary studies of transport

More broadly, literature has been used as a source of material by researchers wanting to explore the relationship between feminine and masculine subjectivity, social agency and mobility (Carter 2002; Pearce 1999; Starostina 2003; Thacker 2006). These researchers use literary representations of transport technologies such as cars and trains in both 'high' and 'popular' literature and use both contemporary as well as historical novels. One example of this work is Thacker (2006) who examines a range of 20th century literary engagements with the experiences of technologised transport. He shows how the sense of modernity as flux can be explored more comprehensively by particular reference to the spatial histories of the transport system. He suggests that auto-mobility produces a particular modern form of subjectivity, where the driver is an autonomous individual and the passenger a supposedly inferior form of modern selfhood. However, drawing on Virginia Woolf and Martin Amis' writings, he shows how this distinction was questioned, indicating the gendered construction of automobile identities. Thus, Woolf was according to Thacker a perpetual passenger, who found this automobilist experience one of a free and mobile life, rather than a diminishment of subjectivity. In contrast, Amis connects stunted masculinity with the thwarted movements of the car driver. These literary representations indicate some of the complex range of cultural representations that automobile subjectivity has taken across the century. This and other articles demonstrate how such literary material provides a fertile material for analysis.

Finally, we want to draw attention to one suggested research perspective, namely an aesthetic approach to mobility (Naukkarinen 2006). This approach suggests that everyday mobility be approached from the perspective of aesthetics, and it draws attention to the point made by social scientists that we must see corporeal travel as closely related to imaginative travel (Urry 2000). Our everyday mobility consists of various ways of getting about, and sometimes our approach to them is aesthetically coloured. That we move in different ways and link them with aesthetic considerations of some sort is deeply rooted in our thinking and being. Our bodily experiences of the world are typically movement experiences, and our conceptual thinking is built on them. When we categorise our being in the world, one way is the ae-

sthetic approach, indicated by our aesthetic choices as well as by our aesthetic comments and analysis. While the author does not mention gender, it is clear that this approach will have gendered implications. This perspective could be useful as a way of thinking about everyday mobility, since it links physical travel and representations. Several examples of possible research avenues are given, such as studying car adverts from the perspective of the driver: such adverts often appear in urban space, the driver watching them as s/he drives past. It could be the aesthetics of novels, popular culture as well as art which undoubtedly affects our thinking and behaviour in everyday life. It could also be the aesthetics of virtual worlds, looking at the aesthetics of movement represented in such technologies.

These contributions from visual culture and literature show how representations can be used to analyse the cultural meanings involved in transport technologies. Such technologies are never neutral, simply determining use, but spin up a wealth of cultural materials that represent it and which are part of the cultural imaginations of the time they are set in. The reviewed research shows how both in visual culture and literature gender, subjectivity and mobility are deeply intertwined in the sense of being fundamental to understanding cultural meanings and identity associated with use. However, there is a shift of emphasis in the materials. The research drawing on advertisements has a focus on the gendered cultural meanings involved in transport in order to understand differential practices and uses of research, and these analyses point towards the ways in which such cultural meanings are embedded in broader societal relations. In contrast, the research drawing on literature uses cultural material involving transport technologies to explore broader questions of gender identity and modernity. Here transport technologies constitute one field of practice in line with other practices such as the labour market, the family or education. In doing so, these studies suggest the centrality of such technologies for understanding past and contemporary subjectivity as well as central Western notions of autonomy and independence.

3.4 OTHER RESEARCH TOPICS

In this last section we address some specific research issues which have been addressed from a gender perspective in the transport literature. These are topics which have developed out of feminist concerns such as women's fear; topics which have de-

veloped with regard to planning issues such as safety and valuation of infrastructure as well as broader challenges facing the sector such as ICT's and sustainability. For different reasons, gender has proven to be an especially relevant perspective.

3.4.1 Fear and safety in public space

Some of the explanations of women's different travel patterns were given in the previous section, but we also want to point out a different strand of explanation. This is a research direction focusing on the constraints for travel resulting from women's fear of male sexual violence (Law 1999). This tradition drew on a broadly radical feminist tradition which foregrounds sexuality and identified rape as a central mechanism of oppression, using a methodological approach based on women's experience. Later on, this research tradition developed different types of understandings of this fear, also foregrounding women's resistance. This research into the geography of women's fear revealed a pervasive awareness of vulnerability to sexual assault and an array of self-protection strategies and behavioural constraints such as travelling with an escort and avoiding certain places at certain times (see for example Pain 1991). These self-imposed precautionary measures limit mobility significantly as well as contribute to the continued under-representation of women in certain settings, reinforcing the sense of fear for women in those settings. Newer research provides different perspectives, suggesting that in some instances women actively reclaim space, not only through single occasions such as 'take back the night' marches, but also through everyday practices and routinised uses of space (Koskela 1997). Their everyday spatial practices can be seen as practices of resistance. By daring to go out, by their very presence in urban space, women produce space that is more available to other women.

This research theme is related to a broader theme of fear and safety in public and urban space, and there is a substantial body of research developing around this theme in different national contexts. This theme is therefore not just related to travel patterns. Likewise safety and perceived risk are important in relation to developing inclusive measures for public transport, as evidenced by for instance the Transport for London different Action Plans (See chapter 5.2). Fear and safety are repeatedly mentioned in the research literature and in reports as important explanations as to why women choose private means of transportation and avoid public transport. This suggests a need for developing empirical research which explores in more depth the difference between women and men's travel patterns and their fear in ur-

ban space, particularly the ways in which public means of transport are associated with fear, and how such fear is socially produced and also resisted.

3.4.2 Transport and Information & Communication Technologies (ICT's)

Ever since new information and communication technologies such as the Internet and the mobile phone were developed for everyday use, the relationship between physical travel and telecommunication has been discussed. Generally speaking, the debate has from the outset been characterised by an optimism concerning how these new technologies could replace physical travel. Many proponents of the new ICT's believe that the new technologies herald a despatialisation of interaction, the un-mooring of community from place and the end of the tyranny of distance. The IT revolution, it was argued, will reshape society as profoundly as the printing press did 500 years ago; the essence being that place and location – where things are, where you are on the ground, how far away you are from other people, places and things – do not matter. In the context of the transport debate and research, this has meant that there has been an optimism regarding how everyday life might be lived closer to home and environmental problems associated with traffic be reduced. However, as research into the interaction of transport and ICT's has developed, these views have been complicated, opening a large agenda of research questions within the social sciences. According to this agenda, gender has only to a very limited extent been developed as a specific analytical focus and as an empirical question (Hjorthol 2002, 2003). Nevertheless some research questions concerning the intersection between transport, ICT's and gender are developing. We should point out here that we are basing this section mainly on two researchers who specifically address the intersection between transport, ICT and gender, namely Hanson (2006) and Hjorthol (2002, 2003, 2005, 2006). The research concerning teleworking and mobile work is booming, and for the purposes of this section we have limited ourselves to looking at these articles which also focus on research challenges.

One research area is the relationship between gender, work and space in the context of ICT's where Susan Hanson has developed a research agenda (Hanson 2006). She starts from the premise that the role of gender in shaping travel patterns is well-established. Despite labour force participation, women continue to bear a disproportionate share of household work, and this uneven distribution of labour is implicated in the division of labour in the labour market and at home. Travel is also implicated in this, in that people (particularly women) with large domestic respon-

sibilities continue to trade higher wages and better job opportunities for proximity, resulting in shorter journeys to work, lower overall travel distances and smaller activity spaces than those with lighter domestic responsibilities (usually men). One major impact of ICT's is the shift of the location of paid work away from conventional offices and into homes, neighbourhood telework centres and 'office hotels'. The two spheres of home and work are clearly gendered spheres which have contributed to and supported traditional conceptions of gender through the spatial separation of gender into different places, with differential access to information and knowledge. Women have obviously joined the labour market in large numbers in most Western countries and are increasingly engaged in public life. Men's entry into domestic life, however, has been slower. At the same time, telework is closely linked to computer technology which is generally seen (although need not be) as a male-associated technology. This means that telework in general need not be seen as feminine. In fact, many men are indeed engaged in teleworking at home. This raises the question of what impact this has on gender relations in the household. Does this mean that men now to a greater extent assume domestic responsibilities? And will this, in turn, free up women to take jobs further away from home because they have less household responsibilities? These questions show how ITC's might be a stimulus for change in the gender division of labour at home as well as in the labour market.

Another research area is the implications that the shift of fixed work locations into the home has for the role of networks in the shaping of work and communities. One important feature of (some) labour markets is place-based and gendered personal contact between employers, employees and potential employees, and such practices are interwoven into the fabric of the community. This view is based on the understanding that social capital resides in the relations between members, not in individuals. This means that social capital emerges from repeated social exchanges that are usually face-to-face. A key question about the social capital of a person or a group is how much heterogeneity it embraces, since it shapes the diversity of information and norms that one has access to. In addition to community organisations, the workplace, especially to men, is an important locus for personal contacts in which information about jobs is circulated. However, the question is what happens to these networks of interaction in the context of ICT's? Because the Internet disconnects interaction from location, it has been touted as an exceptional democratizer, supposedly providing everyone with equal access to a wealth of information. It seems to offer people an opening to break out of place-based networks and there-

fore to interact with greater diversity. However, we need to explore these questions empirically. How might placeless networks of Internet and Web affect the exchange of labour market information? How might ITC intersect with place-based social interactions, and how are these processes different for women and men? Might IT promote more heterogeneous, less localised, less gendered social capital?

A third topic which has been addressed at the intersection of transport, ICT's and gender is how members of different types of families are using the mobile phone and the car in the organisation of daily activities. This type of research begins from the assumption that the everyday life of families is spread over a large geographical area. This has influence on time, as the experience of time poverty creates the need for efficient transport as well as greater needs for communication. Research (Hjorthol 2005) indicates that the use of mobile phones contributes to the experience of accessibility and safety, greater efficiency in planning as well as greater flexibility at work and at home. However, research also indicates that use of these technologies might be gendered, so that women express a greater need for the car and mobile phone, although they use the car less than men. Likewise women also seem to use the mobile phone more in relation to children. However, we need to know more about how the need to be accessible interacts with using means of transport and means of communication, and particularly how men and women take up the use of these technologies.

These issues are also highly relevant with regard to policy issues, such as the U.K. 'welfare to work' policy. Pointing out women's larger transport burden due to their differential travel patterns as well as women's time poverty due to enlarged domestic responsibilities, researchers call for a focus on how new information technologies can assist women, particularly low-income women and single mothers (Turner and Grieco 2000). These groups of women would benefit from the use of new information technologies in order to reduce time poverty and increase quality of life and in order to minimise dependence on welfare. However, new information technologies tend to be used mainly for the benefit of professional communities, commercial transport and so on, while these solutions also need to be construed in relation to mobility-deprived groups. In making these suggestions, Turner and Grieco provide innovative new ideas as to how the potentials of new technologies can be harnessed to be used for social policy purposes. Thereby they raise a new research agenda at the intersection of transport, information technology, gender and social policy, which needs to be developed further.

What is clear is that as our everyday lives become increasingly spatially extended,

creating new forms of time poverty, means of transport and communication are increasingly necessary for maintaining and developing social relations and activities. In this intersection between means of transport and ICT's there is a need to understand how uses might be gendered. When proponents of the new technologies argue that they transform life as we know it, we also need to know how they might transform gender. The three areas that we have listed here are only some of the areas that might be relevant, and it is an important research task to develop a research agenda for exploring how gender intersects with mobility and communication.

3.4.3 Traffic behaviour and valuation of infrastructure

A more specific sub-area regarding the gendering of technology has developed within mainstream transport research and is concerned with research into actual traffic and driver behaviour and how it might be gendered. The focus on traffic behaviour is a long-standing research issue which is used in relation to planning and design of highways and streets, and with the prioritisation of different goals in the transport sector such as accessibility, high quality, safety, good environment and regional development. In contrast to the research we discussed in the previous section, this type of research is particularly carried out on behalf of policy-makers, public transport organisations and regional authorities. Methodologically, this type of research uses large-scale surveys.

This type of research focuses on the actual driving behaviour in urban environments. It looks at how different types of urban environments such as different street designs, street types and traffic conditions might influence driving behaviour as well as the interaction with other drivers, pedestrians, cyclists and so on. One literature survey shows that men's and women's driving behaviours are increasingly similar (Aronsson 2006). It also shows that young drivers are more likely to be involved in rear-end crashes, and young males more than females. Further, men tend to have a higher average speed than women. Finally, a number of external factors such as road design and traffic flow seemed to explain speed variations. Very little research looks at how this behaviour might be gendered. However, one recent study from Sweden shows that there is a marginal difference between female and male drivers in speed and headway driving behaviour (Aronsson 2006).

3.4.4 Sustainability

A central challenge for the transport sector is the issue of sustainability. Transport is a major producer of climate change gases and is also responsible for local pollution and noise nuisances. While other sectors of society have managed to reduce emissions of climate change gases, the predicted growth in transport in the foreseeable future means that the transport sector's emissions will continue to rise. Given the serious environmental impacts of mobility patterns in wealthy nations, not least in terms of greenhouse gas emissions, it is crucial to study mobility in the combined normative perspectives of gender mainstreaming and environmental sustainability. From a sustainability perspective, a question of high importance is whether accessibility to the activities in which we need or wish to participate is obtained through spatial proximity or through increased mobility. It is also of high importance to environmental sustainability whether gender mainstreaming within transportation is obtained through women's adoption of traditionally male mobility practices or through an adoption among men of traditionally female mobility practices.

Several perspectives have been developed to address these issues. One perspective is developed and used by Norwegian and Danish transportation researchers. In the 1980s, two different models for future urban development were discussed among Norwegian feminist transport researchers: the 'masculine city' and the 'feminine city' (Jenseth et al. 1986). The 'masculine city' was based on a development where women increasingly adopted men's mobility patterns, with the road network and urban land use being adapted to steadily growing auto-mobility. The 'feminine' model implied that men, through encouragement and coercion, increasingly adopted women's traditional travelling patterns, with shorter trips and a higher number of trips by foot, bike and public transport. And instead of a decentralisation of dwellings, workplaces and service facilities to the outer areas of the city, this model implied urban densification contributing to a reduction of the travelling distances between daily-life destinations.

Studies of the influences of urban structural conditions on accessibility, car dependency and travel carried out in different national contexts support the assumptions upon which the ideas about the 'feminine' and 'masculine' city models were built. For example, a study in the Copenhagen Metropolitan Area shows that in the present urban structure of the Copenhagen region, women's accessibility is more equal to that of men if they live in the inner districts. Among suburbanites, there is a clear tendency that women find it necessary to choose among a narrower range of job opportunities and leisure facilities than their male counterparts (Næss 2006 and

2007a). Thus, women living peripherally tend to limit their use of and choice among facilities, while men compensate for lack of proximity to facilities by travelling more. Similar results have been found in Hangzhou Metropolitan Area in China (Næss 2007b).

The results of these studies suggest that in a situation where existing gender roles persist in terms of domestic responsibilities and the privilege of using the car if the household has only one such vehicle at its disposal, dense urban structures will provide a high and fairly equal accessibility to facilities for both genders, whereas dispersed city structures will provide a high accessibility for men and a low accessibility for women. The dispersed urban structures will also facilitate less environmentally sustainable mobility patterns compared to more dense urban structures. In a situation where men adopt traditional female mobility patterns with moderate travelling distances and a high proportion of travel by foot, bike and public transport, a dense urban structure will, similar to the previous scenario, provide a high accessibility to facilities for both women and men, whereas a dispersed urban structure will provide low accessibility for both genders. In terms of environmental sustainability, this scenario implies a low environmental impact of urban travel. If instead gender mainstreaming in transport is achieved through an adoption of traditionally male travelling patterns by women, a dense urban structure will provide fairly high accessibility to facilities for both genders, although congestion may make accessibility somewhat lower than in the previous two scenarios. In this scenario, which is the least favourable one in terms of environmental sustainability, a dispersed urban structure will provide fairly high accessibility to facilities for women as well as for men, although the large amount of car travel may imply congestion levels reducing traffic flows along suburban roads as well as in the inner city.

In spite of the better ability of dense urban structures to integrate concerns of environmental sustainability and gender mainstreaming, contemporary feminist utopias in many European countries depict ecologically sustainable cities as small local communities situated in green surroundings, with local food production and local balance between dwellings and workplaces. *Gemeinschaft* and *life world* are focused on rather than *Gesellschaft* and *system world*. However, the transportation implications of such a settlement structure – given that the residents are not to be prohibited from using facilities outside the little eco-village – is seldom discussed. In comparison, the attempts made in the 1980s to open a gender equality debate within the field of transportation emphasised proximity between the different faci-

lities of the city as a strategy where the inhabitants would not have to choose between a high car dependency and constrained opportunities for choice.

Another perspective on this issue is developed by Polk and Hjorthol. Polk (2003, 2004) compares men's and women's travel patterns as well as their attitudes towards environmental issues and willingness to change behaviour in Sweden. She draws on large-scale travel surveys and attitude surveys. Her results suggest that women were more environmentally concerned and more critical of auto-mobility than men were, that women were more positive towards proposals that reduce the environmental impact of car use and that women express more willingness to reduce their use of the car than men. In general, there are not large differences between men and women, however women consistently showed more support of ecological issues and were more prepared to participate in ecologically benign activities such as reducing car use. This leads Polk to conclude that women might have a potential for accommodating an ecologically sustainable transport system in Sweden. Hjorthol from the Norwegian Institute of Transport Economics makes a similar study where she also begins from the premise that more environmentally friendly travel patterns are desirable from environmental and social perspectives (1999). She points out the great difference in men's and women's use of public and private means of transport, in that women use public transport to a greater extent than men. This, she argues, cannot be reduced to financial or economic reasons, but has also to do with the social and cultural meanings that the different means of transport have.

In her study Hjorthol therefore explores the cultural perceptions that men and women give to public and private means of transport, and she bases her study on a large-scale survey amongst inhabitants in Oslo, the capital of Norway. She shows how the two different types of transport have different cultural values with men and women. Women seem to be more positive than men towards public transport and believe that public transport gives them access when and where they want to travel. In contrast, men see the car as enabling freedom in time and space, and also the car is a masculine mastering project; men's work with and maintenance of the car can be seen as an important arena for their identity. In contrast, women see the car in functional terms. These results suggest in parallel with Polk's results that women's cultural values of transport make them more conducive to using public forms of transport, and therefore they have potential for accommodating environmentally friendly transport practices. However, Hjorthol ends up by problematizing these results. She asks whether women have genuinely more environmentally friendly attitudes, or whether it is because their values are in accordance with the actual possi-

bilities they have for travel. Will their cultural values and practices change as they get better access to cars? Finally, she speculates that the environmental side effects of cars such as pollution and noise, particularly in urban areas, might be a possibility for strengthening urban transport, particularly if other symbolic values associated with public transport could be stressed to attract more men.

Finally, a third perspective is developed by Root and colleagues at the Transportation Studies Unit in Oxford (Root et al. 2000, Root and Schintler 1999). Here the understanding of women's and men's different transport habits and the idea of sustainable transport are situated in a broader societal context, and they seek to refine the hypothesis of women being more responsive to the challenges of environmentalism through a survey study based in the U.K. The authors point out that an important element in the increased amount of travel is due to women's larger mobility during the last decades. Many factors contribute to this increase. First and foremost, women's entry into the labour force has increased their mobility, taking up particularly lower-income and part-time jobs. But other factors also contribute to women's motorisation. They continue to be primary caretakers of household and family, demographic change and new family structures as well as concerns of personal safety also contribute to women's growing motorization. The authors argue that these factors also lend women's travel its distinctive patterns which may facilitate, potentially, an easier path to sustainable development. Women are frequently positioned in gender-specific ways in the labour market and in the domestic sphere which means they juggle home with paid work responsibilities which create gender-specific travel patterns and needs, where women are more likely to be tied to particular localities. This means, for example, that women make more short trips than men, that they value safe local streets, relatively clean air and low levels of noise more than men. Thus, women's experience as marginalised workers who combine home and work can make them more ambivalent, and therefore less likely to adopt the dominant attitude of valuing mobility above accessibility. Further, it might mean that some groups of women could respond more positively to the challenges of environmentalism. This study therefore contextualises women's different travel patterns and different attitudes giving an account of women's socio-economic conditions.

When some critical voices argue that women's different travel patterns are simply a measure of their inequality, these studies in different Western European countries document through conceptual developments and large-scale survey studies men's and women's travel patterns and environmental attitudes, and indeed make plausible the hypothesis that women are potentially more accommodating for a sustain-

able transport system than men. However, at the same time the studies also raise a number of questions which need to be explored further. First of all, we need to understand the interaction between men's and women's travel patterns and environmental values in a context where some women's lives are beginning to look more and more like men's. Will this mean that they increasingly copy men's travel patterns and environmental values? Or will they continue to have distinctive travel patterns and values? Further, none of the studies make refined distinctions between groups of women according to social class, age, ethnicity, locality and so on. However, the studies by Root et al. seem to suggest that it is indeed women's particular socio-economic position that is important for their travel patterns and values. Also, these studies focus on women as a group, while it could be argued that since it is men's travel patterns that pose a problem in terms of sustainability, we need more knowledge about the links between men and auto-mobility. This might help us understand men's travel patterns, environmental attitudes and responsiveness to change in travel behaviour as more complex. Finally, from a gender mainstreaming perspective there is a danger that a one-sided focus on women as a target for policies that seek to reduce car emissions sidestep issues of equity in a society that values mobility (Grieco 2005/6). Thus, there is a need to understand how goals of sustainability can be integrated with goals of equity.

3.4.5 Driving, risk and safety

Research on gendered patterns of risk and accidents in relation to car driving and road traffic is a well-established area and is carried out as part of the mainstream transport research. Most of this research concentrates on documenting how and why women's and men's accident patterns are different, relating it to social background, risk-taking behaviour and the relationship between body and car design.

Men are in general more often involved and killed in traffic accidents and their crashes are more severe than women's crashes. Surveys show that crash rates per licensed driver are generally higher for men, but per mile driven the rates are somewhat higher for women (e.g. Ferguson et al. 2006). However, when crashes severity is controlled for gender, women are more likely to be killed or injured than men are (Ferguson et al. 2006). Studies and statistics state that the fatality rate is different for different groups of people according not only to gender, but also to: age, educational background, socio-economic background and ethnic background (e.g. Dobson 2005; Wiberg 2006; Hasselberg 2004; see also OECD's statistics). Lower

socio-economic groups and young people have higher fatality rates in transport than groups with a higher socio-economic background or older people (Laflamme 2001).

Research into accidents often concentrates on specific groups who seem to be more vulnerable or taking more risks in traffic: young people and especially young men, elderly people and especially elderly women, and there are also some studies of pregnant women's safety in cars (e.g. Kim 2005; Acar 2006 et al.; Klinich et al. 2006). Some surveys explore why elderly women over 65 have a higher accident involvement rate than men over 65 (Stamatiadis 1996). Part of the explanation seems to be that there is a growing group of elderly women driving cars and that these women have not earlier been the primary driver, but become so late in life as a consequence of their partners' death or illness, and are therefore not so experienced drivers.

One set of explanations of the different accident rates between men and women are that of risk-taking. Studies state that men's and especially young men's attitude and behaviour is generally more risky in traffic: they are more likely to be involved in alcohol or drug-related collisions, more likely to be involved in speed collisions, more likely to be unbelted, more likely to ride unrestrained, more likely to cross red light by foot and more likely to violate traffic laws in general (e.g. Ferguson et al. 2006 and Rosenbloom 2006). The majority of studies on alcohol and driving have also had young men as their focus, but studies of women and alcohol use can be found (Waller 2005).

During the last couple of years there has been a much greater increase in crashes for women than for men (Waller 2005), and there is an ongoing discussion whether and how women's attitudes and behaviour – especially young women's behaviour – in traffic have changed over the last couple of years to become more aggressive and more risk-taking, and whether or not their attitude has become more like men's (Forward et al. 1999; Kostyniuk et al. 1996). More women drive and they drive farther and more often than earlier, and more women have got a licence and access to cars (Ferguson et al. 2006). However, at the same time research states that women generally consider safety and traffic regulations more important than men and are considering risk more than men (Laapotti 2006; Ferguson et al. 2006).

Other types of studies concentrate on why some groups seem to have specific types of accidents and how this is related to the design and construction of the means of transport (cars) and the body differences. Government crash tests and tests conducted by consumer groups have for many years used dummies that represent an average-size man, but there is a growing recognition in research of the impor-

tance of using dummies representing also women, pregnant women and children (Ferguson et al. 2006).

An area of ongoing discussion is whether or not the female body is more vulnerable to injuries in car crashes, and if so whether or not the design of cars favours the male body or could be changed so it would protect shooter drivers better. Some studies show that shooter drivers (often women) have a higher risk of ankle/foot fractures in frontal collisions (Dischinger 2005), and women and children are more vulnerable to airbag-related injuries while elderly people are more likely to be injured by seat belts in minor accidents, where young people would not be hurt. Women have more often whiplash, because women tend to drive smaller cars and are therefore exposed to higher crash severities, have the seat more upright to increase visibility, and this will increase distance between seat and head (Viano 2003). At the same time, other research suggests that countermeasures such as seat belts, airbags and head restraints typically work as well or better for women (Ferguson et al. 2006). Pregnant women have not gained a lot of attention, but there are studies of this group. For example studies suggest that pregnant women should receive counsel on how to use the seat belt during pregnancy (Acar et al. 2006 and Klinich et al. 2006).

As in other parts of transport research, this area has an almost exclusive focus on the car. However, from a gender perspective, research in safety should also be an issue in relation to other means of transport such as: planes, ships, trains, biking and walking. Safety and accidents are not well-established when it comes to other transport means, but one example of such a study is Clifton's study of gendered patterns of accident for pedestrians (Clifton 2006). One could also suggest developing socio-cultural perspectives as well as sociological theories of risk in order to understand risk-taking behaviour in traffic among different groups.

3.5 NEW AND EMERGING RESEARCH CHALLENGES

In this chapter so far we have surveyed the existing literature in the field of gender and transport. Building on this mapping in this final section we will make a catalogue of 'old', new and emerging research needs in the area if this research area is to respond to the challenge of mainstreaming.

Sustainability & gender equality

Sustainability is a central challenge to the transport sector. However, the goal of sustainability in combination with the goal of equality in making transport and mobility available for all raise considerable challenges to European transport systems. Is it possible and convenient to translate women's mobility patterns into more general models for sustainable developments? Here women's different transport models become an ideal model which should be copied by men. Or are women's different transport modes just another indication of their inequality? Here the lesser use made of travel by women becomes an indicator of their restricted participation in the labour market, leisure and other activities compared to men. Important research contributions have been made to this topic, but are only beginning to highlight the considerable challenge of addressing questions of equality and sustainability at the same time. Approaches need to be developed that encompass and address questions of equality and sustainability at the same time. Research on gender should therefore address the issue of sustainability and not assume that women's travel should be modelled on men's. At the same time, research on sustainability should not advocate singularly for travel reduction without addressing the inequality issues involved in travel.

Citizenships of mobility, in/exclusions and welfare state

Free mobility for all citizens is a central goal of the European Union. At the same time, there is very little research that addresses the transport sector in terms of citizenships, in terms of inclusion and exclusion processes and welfare state. We need to understand how transport is involved with processes of in- and exclusion for women, as well as for other groups. For example, we need to understand how gendered mobility is related to different typologies of welfare regimes and to typologies of male breadwinning states which also account for different patterns of care and gender, as well as different axes of private and public. How can mobility and gender be linked to recent ideas of a new welfare architecture for Europe? There is an urgent need to rethink the transport sector in terms of citizenship and welfare state and to develop a research agenda that addresses these issues.

Car culture and gender in Europe

Transport patterns and practices are gendered, but so are our perceptions, imagina-

tions and cultural understandings. We need to know much more about the ways in which gendered cultural perceptions shape and inform the current transport systems. This would involve research on how gendered cultural perceptions of trans-mobility are shaping identity at an individual level, but also how they are shaping popular culture, art and aesthetics at a communal level.

Information technologies for transport and everyday life

An emerging research agenda focuses on the implications of information technologies for transport and everyday life. According to this agenda, gender has only to a limited extent been developed as a specific analytical focus and empirical question. It is however central that gender becomes incorporated into this research agenda. As our everyday lives become more spatially extended, means of transport and communication are increasingly necessary for maintaining and developing social relations and activities. In this intersection there is a need to understand how uses might be gendered. Some research topics which could be addressed are the impacts of tele-working by men and women on gender relations in the household. It could be how mobile phones impinge on the organisation of the everyday life of families, both men and women.

Need for development of comparative and disaggregated surveys

If policy-makers and practitioners are to address issues of gender, easily accessible, comparable and subgregated data on travel patterns are necessary. There is therefore a need for harmonising data and developing standardised survey methodologies across the EU. This could be done by the European Statistical System. It is therefore a challenge to develop methodologies for travel surveys that can be used across Europe. This would enable comparative, longitudinal and more detailed studies and be a tool for researchers and practitioners.

Demographic change, changes in family patterns and employment

All European countries are undergoing huge shifts in demographic patterns, family patterns and employment. These shifts will invariably affect transport patterns, including the feminisation of older drivers and older road users and the implications this might have, as well as travel as part of work and/or family life.

New forms of mobility

Transport research traditionally focuses on the travel to work-journey. There is a need to focus on the increasing complexity of journeys and how these are gendered. As our everyday lives are becoming increasingly spatially complex, it is necessary to understand how this complexity is gendered. Further, transnational journeys done by airplane and high-speed trains are on the increase, but we know very little of the ways in which this travel may be gendered. Another focus could be on the increasing leisure travel carried out by all or most groups of people and how this is affected by gender. Finally, an overwhelming part of transport research focuses on cars. Given the dominance of the car, this is hardly surprising. However, we need to know more about other forms of travel if our transport challenge should respond to the challenge of sustainability as well as gender mainstreaming.

Digging into the past: historical framings of gender and transport

While only little historical research exists, what does exist is making a significant contribution to our understanding of the research area, for example Virginia Scharff's work on the automobile in early 20th century North America. However, little exists on the historical developments and framings of the European transport technologies from a gender perspective. Historical research can contribute to our understanding of how present day transport systems were framed materially and discursively. It can highlight how notions that we now take for granted are the result of complex and shifting historical processes and ideals.

3.6 CHAPTER SUMMARY

This chapter has covered existing research into gender and transport, focusing on the gendered users of transport. It shows that there is a substantial body of research, but that it is fragmented in terms of continuity and has developed unevenly in different disciplines. This body of research shows that individual users of transport are gendered.

- There are clear and persistent gender differences in travel patterns. Men consistently travel further than women, men are more likely to travel with a car and women with public transport, and women's trip tend to be more local. Explanations for these

differences are amongst others, linked to unequal gendered relations in household and labour market, urban structures, as well as gender socialization. This means that men and women make different uses of a shared system of transport.

- Given the serious environmental impacts of mobility patterns in wealthy nations, not the least in terms of greenhouse gas emissions, it is crucial to study mobility in the combined normative perspectives of gender mainstreaming and environmental sustainability. From a sustainability perspective, a question of high importance is whether accessibility to the activities in which we need or wish to participate is obtained through spatial proximity or through increased mobility. It is also of high importance to environmental sustainability whether gender mainstreaming within transportation is obtained through women's adoption of traditionally male mobility practices or through an adoption among men of traditionally female mobility practices

- In popular culture in the form of adverts, images, film and literature there is a gendered representation, where men more often are represented as travelers, and women as having domestic responsibilities. For example, while the car was not seen as gendered initially in the beginning of the 20th century, research show how both car travel and the ideas of freedom and movement associated with the car persistently is linked to masculine identity. This means that the worldviews guiding our common sense perceptions of transport and mobility are gendered.

- Gender is a central stratifying factor in transport use. While age has been a theme in the literature, there is little knowledge about how gender interacts with other stratifying factors such as ethnicity, handicap, geographical location, class and sexuality. In relation to the EU aim of equality covering gender, as well as ethnicity, sexuality, age and handicap, it is necessary to develop understandings that combine these different structuring factors, as well as address the consequences of changing gender relations for transport uses.

NOTE

1. As well as the mobility of goods, but this is not the aim of this report.

4. The Gendered Transport Sector

Unknown artist 1959, TfL/London Transport Museum

IT'S A GOOD JOB



... IT'S A SERVICE

APPLY TO THE
RECRUITMENT CENTRE
280 MARYLEBONE ROAD, N.W.1

POSTERGRAPHICS & CO. LTD. LONDON N.W.1 2JH

Tn this chapter, we will look at the structural level of transport policy – or the internal, which is about recruitment, promotion and work organisation at all levels. The structural level focuses on women's and men's participation in and influence on decision-making, planning and policy and on the gender-segregated occupations in the transport sector. As we discussed in chapter 2, the transport sector on the structural level can be understood as a large technological system that is comprised by both public and private institutions and organisations responsible for providing mobility and accessibility. We will here only cover a small part of this large sector and take a closer look at the question of women's participation in decision-making as well as in employment in the transport sector.

4.1 REPRESENTATION IN DECISION-MAKING

In this section, we will look at women's representation in decision-making. The gender mainstreaming literature points to how organisations tend to embody male agency and thus obstruct a gender equality agenda while Polk noted that one of the reasons for the relative failure of the gender mainstreaming efforts in Swedish transport policy was the structural barriers where men are seen as the norm in fulfilling the role of experts and decision-makers. We want to see whether this can be said to be the general picture in European transport politics: is the European transport sector dominated by male decision-makers? First we will examine the EU level – i.e. the parliament and different bodies that advise the parliament and the commission. Next we look at the national parliamentary transport committees in a number of EU countries, and we conclude by having a closer look at one of the countries in the EU that normally scores high on different gender equality indexes – namely Denmark.

4.1.1 EU level

At the EU level, we deal with two kinds of political representation. There is the direct political representation in the European Parliament where much of the work is delegated to committees. And then there is a more indirect political representation in different advisory councils and boards that advise parliament and commission on several aspects.

Political committees

In the European Parliament we will take a closer look at the sex disaggregation of three parliamentary committees, all in some way or the other related to the subject matter of this report: the parliamentary committee on Transport and Tourism (TRAN),² the parliamentary committee on Industry, Research and Energy (ITRE)³ and the parliamentary committee on Women's Rights and Gender Equality (FEMM).⁴ The role of the parliamentary committees is to draw up, amend and adopt legislative proposals and own-initiative reports. They consider Commission and Council proposals and, where necessary, draw up reports to be presented to the plenary assembly. A committee consists of between 28 and 86 members of the European Parliament (MEPs) and has a chair, a bureau and a secretariat. The political make-up of the committees reflects that of the plenary assembly.

The Transport and Tourism Committee (TRAN) is responsible for matters relating to the development of a common policy for rail, road, inland waterway, maritime and air transport, in particular common rules applicable to transport within the European Union, the establishment and development of trans-European networks in the area of transport infrastructure, the provision of transport services and relations in the field of transport with third countries, transport safety and relations with international transport bodies and organisations for matters relating to postal services and to tourism. The Committee consists of 51 members of which 44 are male and 7 are female.

The Industry, Research and Energy Committee (ITRE) is responsible for the Union's industrial policy and the application of new technologies, including measures relating to SMEs, the Union's research policy, including the dissemination and exploitation of research findings and space policy. It is also responsible for the activities of the Joint Research Centre and the Central Office for Nuclear Measurements, as well as JET, ITER and other projects in the same area. Other areas include Community measures relating to energy policy in general, the security of energy supply and energy efficiency, including the establishment and development of trans-European networks in the energy infrastructure sector, the Euratom Treaty and Euratom Supply Agency; nuclear safety, decommissioning and waste disposal in the nuclear sector, and the information society and information technology, including the establishment and development of trans-European networks in the telecommunication infrastructure sector. The Committee consists of 54 members of which 33 are male and 21 are female.

The Committee on Women's Rights and Gender Equality (FEMM) is responsi-

ble for the definition, promotion and protection of women’s rights in the Union and related Community measures, the promotion of women’s rights in third world countries, equal opportunities policy, including equality between men and women with regard to labour market opportunities and treatment at work, the removal of all forms of discrimination based on sex, the implementation and further development of gender mainstreaming in all policy sectors, the follow-up and implementation of international agreements and conventions involving the rights of women and information policy on women. The Committee consists of 40 members of which 3 are male and 37 are female.

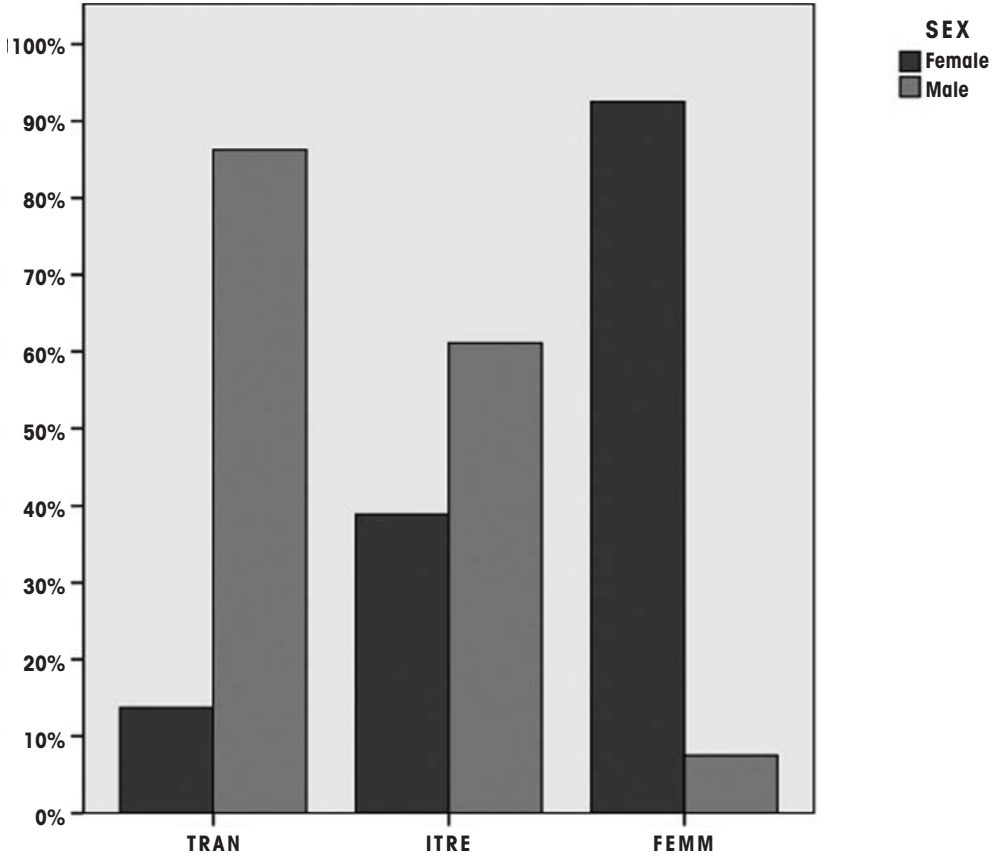


FIGURE 1:
Female and male members of three parliamentary committees in the EU Parliament
<http://www.europarl.europa.eu/activities/expert/committees.do?language=EN>

As is clear from the diagram above, transport is indeed a masculine area when it comes to EU politics. Just around 14% of the members of the transport and tourism committee are women. This is compared to the composition of the parliament itself where 31% of the members are women (244 of 783 members).⁵ When we look at another technical area – that of industry, research and technology – we see that it is still a very male-dominated area with 62% of the members being men. However, this does correspond with the composition of the parliament as such. In the other spectrum, we find that issues of women's rights and gender equality are clearly conceived as women's concerns. Almost 93% of the members are women. Interestingly, TRAN and FEMM are the two committees with the most biased composition. If we take the unbalanced composition of the parliament into account (69% men, 31% women), we can also conclude that issues such as environment, public health and food safety (fifty-fifty balance) and consumer protection (51% women) are issues that interest women – or are offered to women? At the other end of the scale, the committees on legal affairs (82% men), constitutional affairs (83% men) and security and defence (83% men) are predominantly male.

Research and advisory council

Besides the political level there also exist a number of research and advisory councils that seek to influence European transport policy and transport research policy. Here we will take a closer look at the sex disaggregated composition of some of these institutions.

European Rail Research Advisory Council (ERRAC)⁶ was set up in 2001 with the goal of creating a single European body with both the competence and capability to help revitalise the European rail sector and make it more competitive by fostering increased innovation and guiding research efforts at European level. ERRAC comprises 45 representatives from each of the major European rail research stakeholders: manufacturers, operators, infrastructure managers, the European Commission, EU member states, academics and users' groups. ERRAC covers all forms of rail transport: from conventional, high-speed and freight applications to urban and regional services. ERRAC focuses on defining and implementing steps to achieve a joint European rail research strategy and on enhancing collaborative European rail research by, among other things, building consensus among stakeholders, improving synergies between EU, national and private rail research and strengthening and re-organising research and development efforts.

The European Road Transport Research Advisory Council (ERTRAC)⁷ was es-

established to mobilise all stakeholders, develop a shared vision and ensure timely, coordinated and efficient application of research resources to meet the continuing challenges of road transport and European competitiveness. ERTRAC members are high-level representatives from all road transport sectors including consumers, vehicle manufacturers, component suppliers, road infrastructure operators and developers, service providers, energy suppliers, research organisations, cities and regions as well as public authorities at both European Union and national level. ERTRAC focuses on providing a strategic vision for the road transport sector with respect to research and development, stimulating increased effective public and private invest-

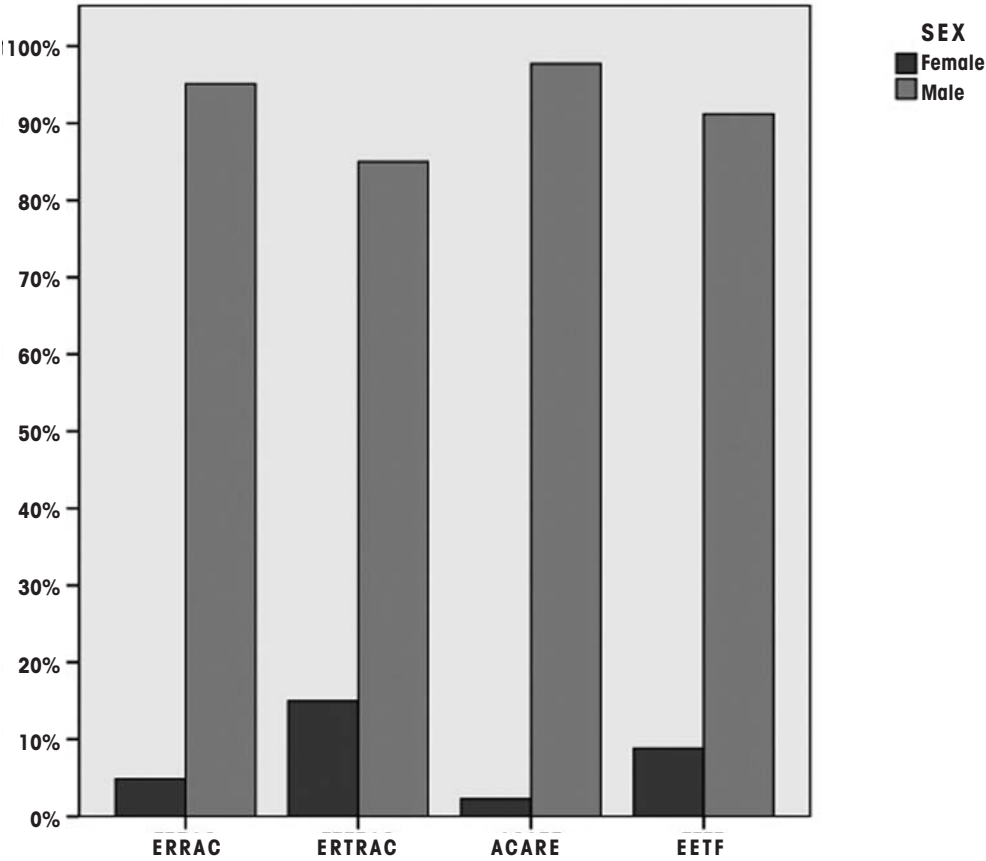


FIGURE 2:

Female and male members of European advisory councils

<http://www.errac.org/>, <http://www.ertrac.org/>, <http://www.acare4europe.org/>,
http://ec.europa.eu/dgs/energy_transport/forum/index_en.htm

ment in road transport research and development, contributing to improving co-ordination between the European, national, regional and private research and development actions on road transport and promoting European commitment to research and technological development ensuring that Europe remains an attractive region for researchers and competitive industries.

ACARE – Advisory Council for Aeronautics Research in Europe (ACARE) was launched to create an advisory council to develop and implement a strategic approach to European aeronautics research. Its main focus is to establish and carry forward a Strategic Research Agenda (SRA) that will influence all European stakeholders in the planning of research programmes, particularly national and EU programmes, in line with the Vision 2020 and the goals it identifies. ACARE comprises about 40 members with clearly defined and commonly agreed upon terms of reference, including representation from the member states, the commission and stakeholders, including the manufacturing industry, airlines, airports, service providers, regulators, the research establishments and academia.

The diagram below shows the sex-disaggregated composition of the governing bodies of the three advisory councils:

This diagram clearly shows that the transport research advisory councils like their political counterparts are also a masculine domain. The ERTRAC Steering Group has 72% male membership, the ERRAC Plenary Working Group 95% male membership and the ACARE membership comprises 93% men.

ERTRAC, ERRAC and ACARE are independent of the EU whereas the European Energy and Transport Forum (EETF) is a consultative committee created by the European Commission composed of high-level representatives from a large range of sectors and activities in the fields of energy and transport. This forum is part of the commission's initiative to improve European governance through increased public participation, transparency and dialogue between the commission and the interested parties. The forum's mission is to provide opinions on any commission initiative in the field of energy and transport policy. It also serves as a monitoring centre for energy policy (all energy sources) and transport policy (all forms of transport). It will offer its views on competitiveness and structural adjustments in these sectors, incorporating environmental, social and safety concerns. The forum comprises 34 members covering a wide range of areas of activity within the energy and transport sectors: operators, infrastructure and networks, users and consumers, trade unions, representatives of environmental protection and safety, especially in the field of transport, and academic experts, think tanks. As can be

seen in the above diagram, men also dominate this forum. 91% of the members are men.

4.1.2 National political level

We have also taken a look at the national political level. The below diagram shows the sex-disaggregated composition of parliamentary transport or transport-related

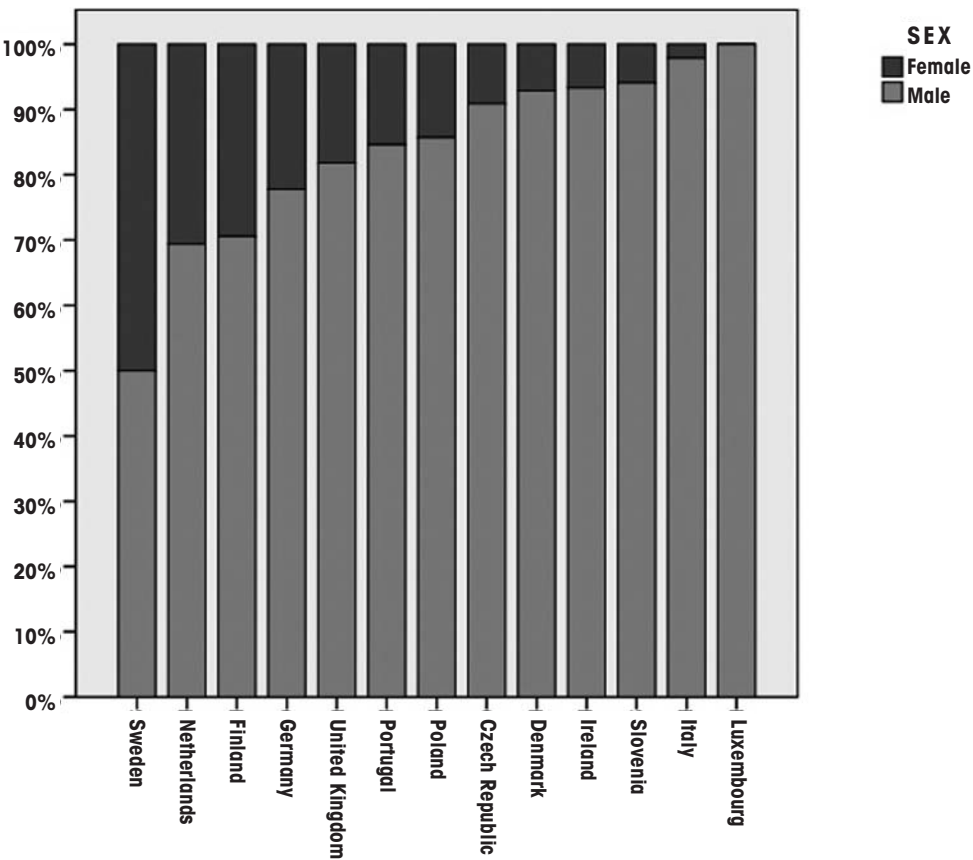


FIGURE 3:
Female and male members of national transport-related parliamentary committees
http://www.riksdagen.se/default____56.aspx, <http://www.parlement.nl/>,
<http://web.eduskunta.fi/Resource.php?parliament/index.htm>, http://www.bundestag.de/btdocs_el/index.html,
<http://www.parliament.uk/>, <http://www.assembleiadarpublica.pt/ingles/index.html>, <http://www.senat.gov.pl/indexe.htm>, <http://www.senat.cz/index-eng.php>, <http://folketinget.dk>,
<http://www.oireachtas.ie/ViewDoc.asp?fn=/home.asp>, <http://www.dz-rs.si/index.php?id=69>, <http://www.parlamento.it/>, <http://www.chd.lu/default.jsp>

committees in many of the EU member states. It has been possible to obtain data from 13 countries (Czech Republic, Denmark, Finland, Germany, Ireland, Italy, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, Sweden and the United Kingdom). 5 countries (Estonia, Latvia, Lithuania, Slovakia and Spain) did not seem to have committees directly dealing with transport issues, and in 6 countries (Austria, France, Hungary, Greece, Malta, Cyprus and Belgium) it was not possible to obtain the required data.

Only two countries, Sweden and the Netherlands, are below 70% male membership of the transport committees. Otherwise, the male percentage ranges from 70.6 (Finland) to 100 (Luxembourg). As in the previous segment, these figures should of course be evaluated in relation to the number of men and women in the national parliament. Here, the United Kingdom has the best correlation between the percentage of women in the transport committee and the percentage of women in the parliament: 18.2% women in the parliament and 18.5% in the committee. For the rest of the countries it is notable that the percentage of women in the transport committees is lower than the percentage of women in the parliaments as such. Except for Sweden. Not only does Sweden have a fifty-fifty balance in the committee; this number is also higher than the percentage of women in parliament which is 45.3%. So with the exception of Sweden, on the national levels the picture is the same – transport is a male-dominated field when it comes to political representation.

4.1.2 A closer look at Denmark

In this section, we will take a closer look at one of the EU countries – Denmark. We will look at the political level and at the research advisory and grant giving level.

Political level

The Danish Parliamentary Traffic committee's work is connected to handling of law proposals and law resolutions and parliamentary control with the Danish government. Its field of responsibility is rail, roads, goods traffic, public transport, bridges, ferries, airports, ports, coast protection, meteorology and mail services.

After the first reading of a Bill in the Chamber, the Bill is referred to a committee. The committee examines the proposal, and subsequently the committee members are free to ask questions. They put their questions to a Minister, normally to the one dealing with the sphere of competence of the committee. The committees may

also ask a Minister to appear in the committees in order to answer questions, i.e. a so-called consultation. Likewise, the committees can institute hearings. On such occasions, experts and others can make committee members share their knowledge about a subject which is of interest to the committee and give their points of view. Hearings are usually public. Other committee meetings are closed but the press is often briefed subsequent to the meetings. When the committee has finished dealing with a Bill, it submits a report with recommendations and eventual amendments.

In addition to reading Bills and proposals for parliamentary resolution, the com-

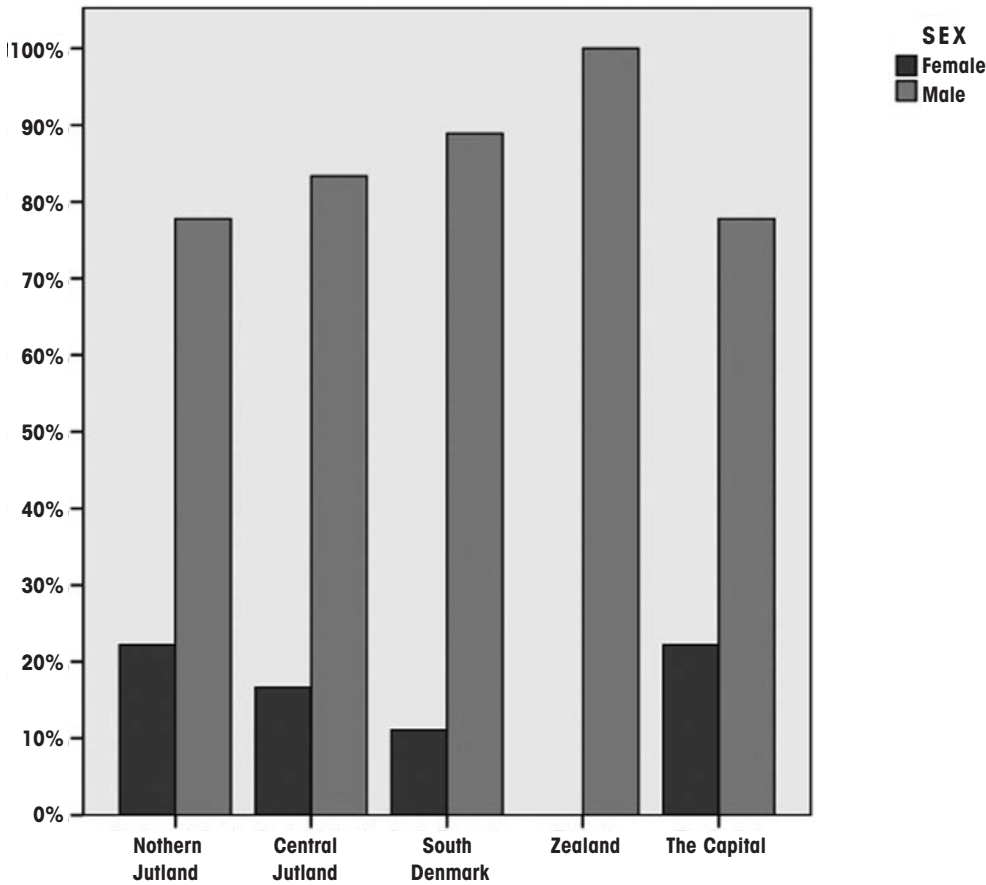


FIGURE 4:

Female and male members of transport-related committees in the Danish regions

<http://www.regioner.dk/>

mittees can also consider other questions within the area of what is normally referred to as the ordinary part of the committee work. The committee often puts questions to the Minister in order to follow the development within the area in question. The committee also keeps an eye on the Minister implementing the laws in a way which is in accordance with the attitude of the majority of the members of parliament. The committee can also submit a report on a subject of particular political interest.

The composition of the traffic committee can be seen in the diagram above. It holds no surprises: only 11.8% of the members are women compared to the 36.9% women in the Danish parliament.

But transport policy is not only decided in parliament. Denmark is comprised of five regions with elected politicians. The regions are responsible for areas such as health (e.g. hospitals), social services and education (e.g. educational services for people with special needs), trade and industry, nature and environment and regional development and public transport. Thus, the regions have committees dealing with either transport or regional development. As the below diagram shows, these committees also have a majority of male membership. In the regions, transport is also defined as a male domain.

In Nordjylland Region (Northern Jutland) there is a close correlation between the region membership and the membership of the committee. Women make up 22.2% of the membership of the committee and 29.2% of the region council. In the regions of Midtjylland (Central Jutland) and Syddanmark (South Denmark), the numbers differ more radically. The councils have 36.5% and 31.7% female membership respectively, whereas women only make up 16.6% and 11.1% of the committees. However, the regions of Sjælland (Zealand) and Hovedstaden (The Capital) are the ones that show the most interesting figures. In Sjælland, there are no women in the committee on regional development, and in Hovedstaden where women make up 41.4% – the highest percentage of the five regions – of the council, they only count 22.2% of the committee on regional development.

Research and advisory committees

The government has set up a number of committees to advise on matters related to transport and to research. We will look at a number of these below.

The Infrastructure Commission analyses challenges, development potential and Denmark's infrastructural needs in the next 20-30 years as basis for the Danish Government's investments in infrastructure. The Infrastructure Commission analyses

the overall choices and sets up strategies for the handling of challenges and what kind of tools can be used to improve mobility and reduce passable problems as well as the consequences for nature, the environment and traffic safety. The commission comprises researchers within the field of economics and transport economics, representatives from transport organisations and transport users.

The Traffic Safety Commission makes proposals for road safety initiatives to reduce traffic accidents in Denmark and evaluates other proposals connected to the Road Traffic Act and Road Traffic Act administration. The members of the commission are from the political parties in parliament and appointed representatives from

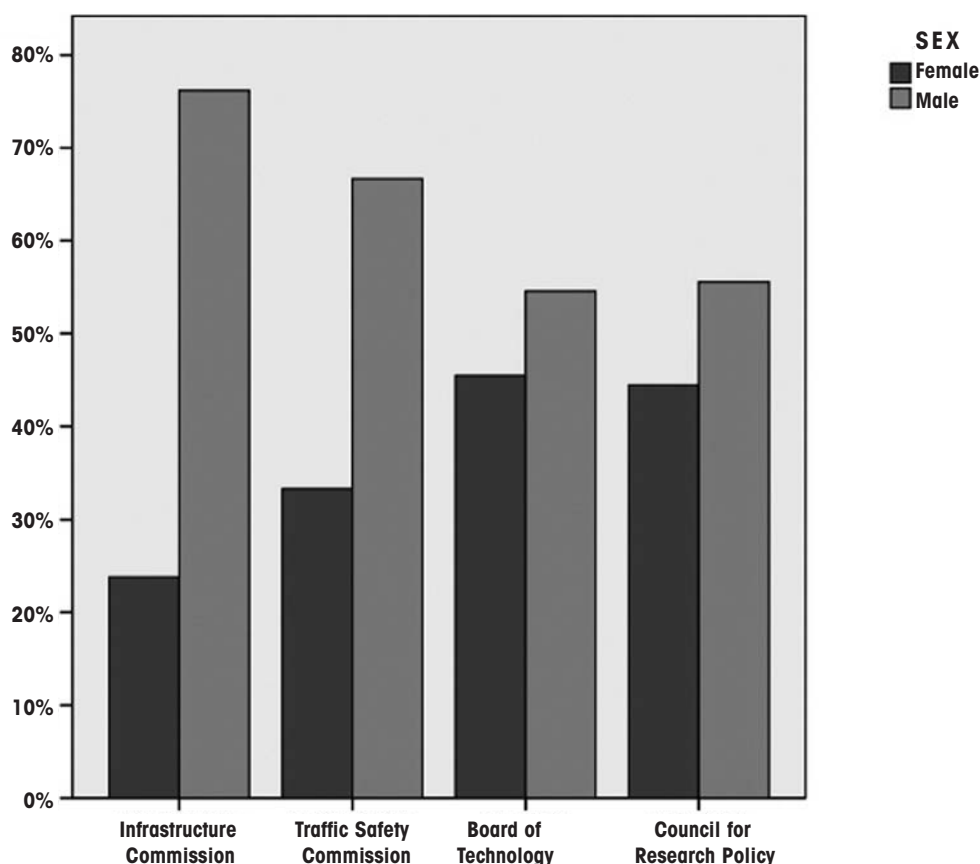


FIGURE 5:
Female and male members of transport-related advisory boards in Denmark

<http://www.infrastrukturkommissionen.dk/sw321.asp>, <http://www.faelrdselssikkerhedskommissionen.dk/fksubject.aspx?type=fksubject&id=72767>, <http://www.tekno.dk/subpage.php3?page=forside.php3>, <http://www.fi.dk>

ministries and NGOs. The commission also has a group of permanent experts attached.

The Danish Board of Technology aims to further the technology debate, assess technological impacts and options and advise the Danish Parliament and the Government. The Danish Board of Technology was brought into being in order to disseminate knowledge about technology, its possibilities and its effects on people, on society and on the environment. The Board is supposed to promote the ongoing discussion about technology, to evaluate technology and to advise the Danish Parliament and other governmental bodies in matters pertaining to technology. The Danish Board of Technology is an independent body established by the Danish Parliament. The Ministry of Research is the supervising authority for the Board, and the Parliament's Research Committee is the Board's steady liaison to parliament. The members are appointed by the Ministry of Science, Technology and Innovation, trade unions, the employers' association and a number of NGOs.

The Danish Council for Research Policy gives the Minister for Science, Technology and Innovation research policy advice. The Danish Parliament and any minister can also obtain research-related advice from the Council. This advice is given upon request or upon the initiative of the Council. The Council's responsibilities generally include advice on Danish and international research policy for the benefit of society.

The Infrastructure Commission and the Traffic Safety Commission both show the same pattern that we have seen with most of the transport-related committees above – both in Denmark and in the rest of Europe: two-thirds or more of the members are men. The Traffic Safety Committee also has a group of experts. All ten experts are men, thus illustrating Polk's point about men being the norm as fulfilling the role of experts. The Board of Technology and the Council for Research Policy have a more balanced composition with app. 45% women and 55% men. These two institutions, however, have a much broader profile as they deal with a broad spectrum of research areas and not just transport-related issues. It is thus possible to find and appoint women to advisory boards when they do not have an exclusive focus on transport.

This is also the case with the Danish Research Councils that together with the above-mentioned Council for Research Policy are part of the Danish research advisory and grant-awarding system. There are two research councils – one for independent research and one for strategic research. The Danish Councils for Independent Research fund specific research activities, within all scientific areas, that are

based on the researchers' own initiatives. The Danish Councils for Independent Research also provide scientific advice in all scientific areas for the Danish Minister for Science, Technology and Innovation, the Danish Parliament and the Danish Government. Furthermore, the Danish Councils for Independent Research strengthen the dissemination and application of research findings as well as participate in international research collaboration. There are five scientific research councils within the independent research area: medical research, natural science, humanities, technology and production and social science.

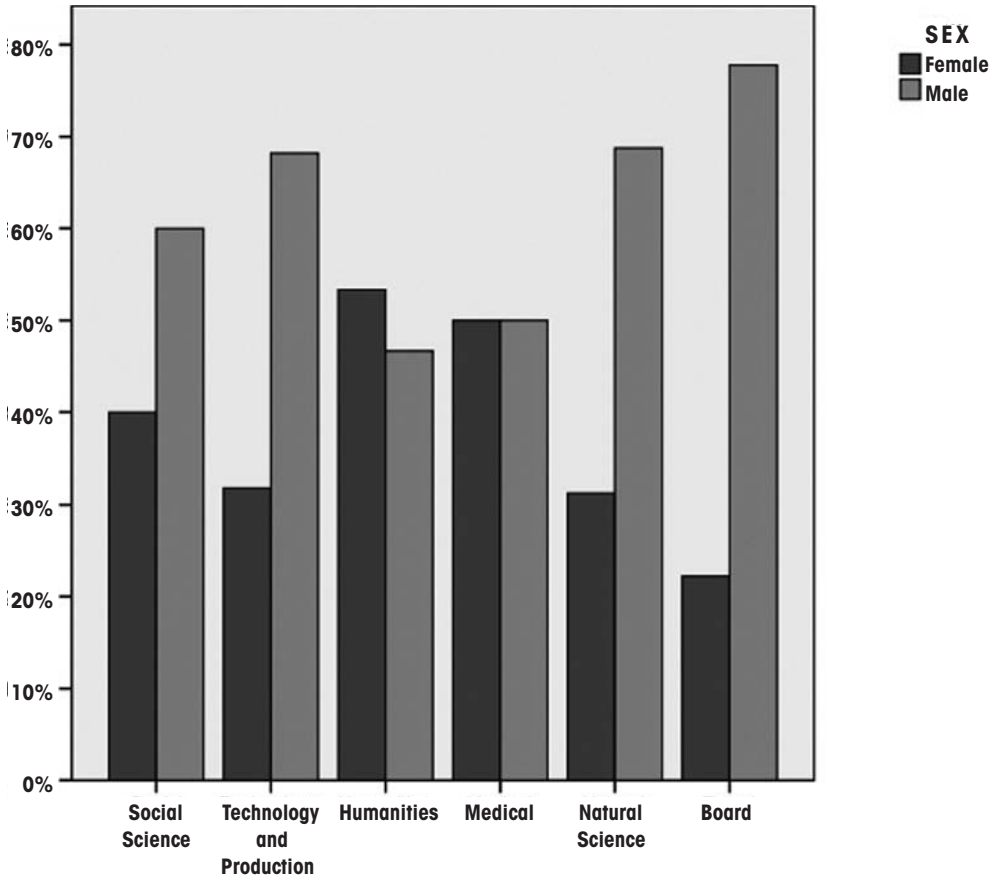


FIGURE 6:
Female and male members of the Independent Research Councils in Denmark
<http://www.fi.fi>

The social science council and the technology and production council are the two independent research councils most closely related to transport research. The social science council has a 40/60 balance which in some literature is pointed to as the necessary critical mass for women's political participation. The technology and production council is in line with another traditional male-dominated area, that of natural science. They both have less than one-third (31.8% and 31.3% respectively) women on their council. This is interesting compared to the Board of Technology mentioned above where there is a much greater balance in the composition. Only humanities (53.3% women and 46.7% men) and medical research (fifty-fifty) have gender balance in the councils.

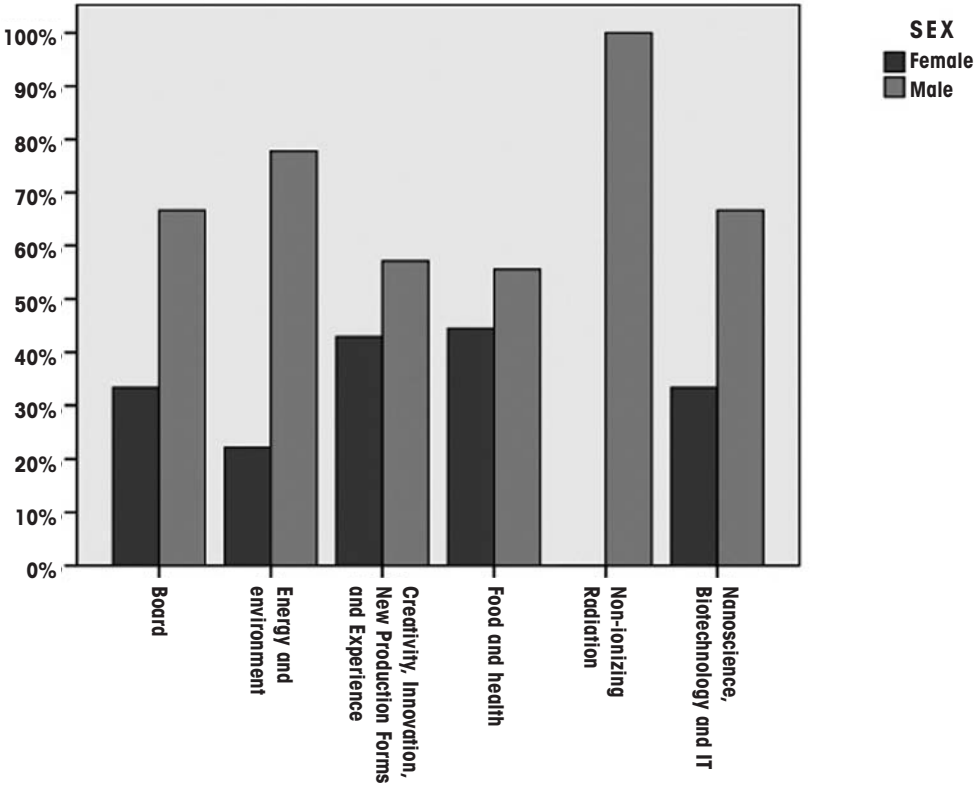


FIGURE 7:
Female and male members of the Strategic Research Councils in Denmark
<http://www.fi.dk>

The Danish Council for Strategic Research funds research and provides advice within politically prioritised and thematically defined research areas. The Council helps strengthen the interaction between public and private-sector research. The Council also seeks out new research trends and can launch initiatives on this basis. The Board does not have the competency to allocate funding. The Board appoints a limited number of programme commissions with the competency to grant funding or, according to previous agreement, the Board leaves this task to the discretion of a scientific research council. The programme commissions are disbanded once their tasks have been completed. When the individual ministries make research funding available, the Danish Council for Strategic Research approves the allocation procedure and subsequently conducts a research-based assessment of the applications. The Danish Council for Strategic Research also advises the Minister for Science, Technology and Innovation, the Danish Parliament and other parties upon request or upon the Council's own initiative.

The programme commissions within the Strategic Research Council most closely related to transport are the commissions on energy and environment and on creativity, innovation, etc. Energy and environment has, besides non-ionizing radiation where there are 4 men and no women, the lowest female/male ratio with only 22.2% women in the commission, whereas creativity seems to appeal more to inclusion of women with almost 43% female members. This can perhaps be explained by the fact that most of the areas covered by this commission fall under the field of humanities which by tradition attract more women (see also the independent research council above). It is also worth noticing that both boards are male-dominated, with more than three-quarters men on the board of the Independent Research Councils and two-thirds in the Strategic Research Council.

4.2 EMPLOYMENT

4.2.1 Gender and employment in the European transport sector

The transport market has an increasing importance in the European Union, and the demand for transport within member states has steadily increased over the last 20 years.

The transport sector is traditionally a male-dominated area. The question is if that is still a clear picture when we look at employment in the sector today. A clo-

ser look at the sex balance in the transport employment shows that it is still the case and that we see the same pattern at the level of transport decision-makers.

The European transport sector has more than 8 million jobs spread out over different areas: land transport (freight and passenger transport via railways, by road and via pipelines), water transport (both maritime and inland waterway transport), air transport and supporting and auxiliary transport, which form quite heterogeneous activities (cargo handling, storage, warehousing as well as employment in travel agencies and the like). In most countries, land transport takes a dominant position, as it employs over 7% of the EU labour force. Though we have not been able to find any statistics about sex balance in employment for the European Union as a whole, we have statistics showing the distribution in each member state.⁸ The employment figures used are from 2001.

Land transport, largely consisting of road transport, is dominated by male employment in all member states, having Greece as the country with the highest percentage of male workers with only 3% female employment and Denmark with the highest employment of female workers (19%). The other member states all fall somewhere in between these two extremes.

Female employment in water transport amounts to 18% on Community average. The two countries with the highest female employment are Luxembourg with 43% and particularly Austria with 68%. These two countries only dispose of inland waterways and are without doubt influenced by a relatively high degree of family businesses. It is further important to mention that the total water transport employment in Luxembourg and Austria is limited to very few jobs – 258 and 66 jobs respectively. Another notable high share of female employment in water transport is registered in Finland (36%). In countries with important maritime shipping activities like Greece, Spain, Italy and the United Kingdom, the share in male employment is far higher – close to or more than 90%.

Regarding air transport employment, Ireland is the only member state where men constitute a minority, having only 47% male employers. In general, the air transport is the branch with the highest female employment in the transport sector within all member states.

When it comes to supporting and auxiliary transport activities, the member states oscillate around an average of 32% female employers, with the exception of Luxembourg, Ireland and Portugal having a share of slightly over 40% each.

We will now turn to a presentation of the literature presenting gender and transport employment to see whether any research has been conducted to explain the un-

equal balance between male and female workers and problems for women's employment within the transport sector.

4.2.2 The gender, transport and employment literature

The amount of academic literature on gendered employment in the transport sector is not huge. While there are texts regarding most sectors, the bulk of the literature is concerned with women working in the airline industry or with women working with logistics.

The literature can be grouped into four themes. The first theme is concerned with women's career possibilities and women as managers – the so-called glass ceiling where women's chances of promotion are reduced the higher up in the hierarchy they come. Related to this theme are texts about the transport sector as a gendered work space – dominated by masculine values and practices. This gendered work space also influences the way women workers in the transport industry are perceived, constituting the third theme. As is evident, the huge majority of the literature is about women working in a male-defined sector. Recently, however, researchers have also turned to investigating the situation of male workers in the sector, which in this context makes up the fourth theme.

Glass ceiling

Simpson and Holley (2000, 2001) examine the impact of restructuring on the career progression of women transport and logistics managers. Research to date has indicated that restructuring can have detrimental effects on women managers, as middle management levels are reduced through delayering and as the organisation takes on a more competitive and 'masculine' culture. Results from this survey on women transport and logistics managers indicate that restructuring can have positive effects. While women experience longer working hours and increased workloads, they encounter fewer career barriers and a more positive attitude to women managers in the organisation. This may point to greater opportunities for training in a changing organisation and a higher probability of new posts and positions being created, as proverbial dead-wood is shaken out. Perhaps more importantly, the climate of change may help to unfreeze and challenge entrenched attitudes and to create a new meritocracy in which women can compete on a more equal footing with men.

Related to this discussion of the glass ceiling is the debate as to whether women

manage differently from men and whether this may constitute a reason for women's lack of progress to the top echelons of organisations.

Rutherford (2001) locates the sameness/difference debate in a wider analysis of management styles, with particular attention paid to the business function. She suggests that any debate on styles must take place within a feminist theoretical framework which acknowledges inequalities of power, economic and patriarchal interests. Management skills are socially constructed and change according to social and economic conditions. The article shows that business function is the most important influence on management style. The author contends, like others, that even in times of great change, men seem to be able to hold on to the most powerful positions in organisations. The convergence of patriarchal interests with business interests ultimately determines what style is valued. The much vaunted feminisation of management does not mean that more women are to be found in senior positions in organisations. Nor do large numbers of women managers necessarily lead to a more feminised management style. Stereotypes of women still act against their acceptance into positions of power while men's ability to adopt some of the traditionally feminine skills of communication means that women's supposed advantage may have been leapfrogged.

Gendered work space

Davey and Davidson (2000) adopt a poststructuralist feminist approach to investigating commercial aviation and the experiences of female pilots in a large international airline based in Europe. The study aimed to examine critically the difficulties faced by female pilots. The data were collected from in-depth interviews with 23 female and 17 male commercial airline pilots. The article argues that commercial aviation continues to be dominated by masculine values and practices, which results in the earlier stages of women's careers being treated as a 'rite of passage'. The first women to join the airline experienced sexism, harassment, high visibility and isolation. Although the extent of the difficulties has declined over time, the experience of dealing with sexism and adapting to the masculine culture continues to influence the attitudes of female pilots, especially towards gender and equal opportunities. The article challenges the impression created by the aviation literature regarding the degree of acceptance of female pilots in commercial aviation and summarises the recommendations made to management in relation to its equal opportunities policy.

This section details first, the experiences of the first female pilots to join the air-

line (sometimes compared with men); and second, the experiences of those who joined later (again, sometimes compared with men). The results showed that the first female pilots experienced high visibility and harassment from male colleagues which, in turn, had long-term implications for women. Although difficulties seemed to have declined for women starting as new recruits, the results also illustrated that female pilots had not changed the culture, but had had to conform to traditionally masculine values and practices. This was evident in their attitudes towards socialising down route (when pilots stay overnight at their destination before returning one or more days later) and humorous comments from male colleagues. As a result of the culture, there was also a tendency for female pilots to downplay any continuing problems arising from gender and to resist steps to promote equality.

The findings show that the first female pilots were an object of attention by flight crew, both on and off the aircraft. They also encountered flight crew who were nervous with women, made sexist jokes, refused to let them operate the aircraft and behaved in an aggressive or sexist manner. The situation confronting these women was different from that of men, who were accepted more easily by the existing flight crew. It was argued that for male pilots, training functioned as 'a rite of passage' and thus eased their transition into the airline (Davey 1993; Trice and Beyer 1984). Prejudice against women, however, meant that they still had to prove themselves to the existing flight crew. Although women generally managed to rise above the problems because of their high level of competence, and were eventually accepted, the experiences of sexism had long-term implications for female pilots. For example, women continued to feel visible and under considerable pressure to perform well. The findings challenge the impression created by airline representatives and managers that female pilots have been accepted quickly and easily in commercial aviation and that the industry is open to women (Chambers 1984; Laboda 1990). In this respect, the findings confirmed the experience of female pilots working for other airlines and/or the military (Chambers 1984; Daily Mail 1995; Laboda 1990). The findings of the study also confirmed previous research showing that women encounter problems at work due to: first, sexist/aggressive behaviours, ranging from sexist jokes to sexual harassment (for example, Cleveland 1994; Davidson and Earnshaw 1990; Earnshaw and Davidson 1994); and, second, their minority status. These include high visibility, isolation, performance pressure, stereotyping and resentment (for example, Davidson 1995, 1996; Kanter 1977a, b; Marshall 1984; Nieva and Gutek 1985; Schein 1994). The comments from female pilots showed that the situation confronting female pilots had improved since the early days, and

that instances of blatant sexism had declined. Nevertheless, female pilots continued to encounter sexist jokes, derogatory comments about women and, on occasions, aggressive/sexist behaviour from male colleagues and passengers. In addition, a critical examination of the comments revealed that women had not changed the airline culture which continued to be dominated by masculine/military values and practices, but had adapted to it. For example, female pilots reported being treated as 'one of the lads', especially down route when they are expected to go out socialising and drinking. The findings were consistent with other studies of male-dominated industries and professions (Collinson 1988; Spencer and Podmore 1987). Adaptation to the masculine culture was not necessarily a problem for women pilots and, even though female pilots admitted to experiencing some problems, they were generally unwilling to make a fuss. The reason for this was that they were worried about further media attention and being singled out as being different and/or a problem, especially regarding sexual harassment. The reaction of women to sexism is understandable when one takes into account the fact that a female colleague who reported sexist behaviour to management gained a reputation as a troublemaker. It is also consistent with masculine discourses which value the ability to withstand aggressive behaviour and overcome problems without having to resort to help (Kerfoot and Knights 1991; Wolfe 1979).

Sexualised women

Tyler and Taylor (1998) use the Maussian model of 'gift' exchange relations as a possible way of understanding the relations of exchange that underpin certain elements of women's work in contemporary capitalism, particularly those aspects of 'women's work' which demand deployment of 'tacit skills' and assumed capacities of women. In addition to the commodity exchange which takes place in the gendered transaction between flight attendants and passengers, a form of 'gift' exchange operates which is neither remunerated or even recognised and which is essentially 'beyond contract'. One of the ways in which women's labour in this form of 'gift' exchange is managed is through the (largely aesthetic) use of their bodies, a management process which requires flight attendants to learn and practise a whole series of gendered 'techniques of the body'.

Women's work is understood here in de Lauretis' terms as the outcome of the commodification of the specific properties, qualities or attributes that women have developed or have been bound to historically which make them women not men.

Empirical studies of women's work have identified three analytically distinct

processes through which certain properties, qualities and attributes associated with women's labour come to be commodified in the performance of 'women's work'. These are referred to here as essentialisation, feminisation and sexualisation.

The flight attendant is the personification of a labour market process which involves the commodification of sexual difference, of women's perceived difference from men.

The role of flight attendant is defined (by airline management, by cabin crew and by passengers) as 'women's work'; it is deemed to involve skills which women are seen to possess simply by virtue of being women.

The presentation and performance of a female body as feminine is deemed to be a skill which women at work in the airline industry are expected to be capable of deploying. The femininity of women workers are largely perceived in terms of aesthetics; to be woman is to look feminine and to be a flight attendant is to 'care' – physically, emotionally and even sexually – for others.

Whitelegg (2002) explores the recent history of female airline cabin crew in the context of 'emotional labour', whereby women's 'virtues' are first essentialised into charm, pastoral care and sexuality and then turned into a commodity form. Though historically some long-distance carriers employed only men – or mainly men – in the cabin, the job in question has been long-regarded as 'women's work' – centred on performing a commercialised version of the caring and service activities carried out for centuries in the domestic sphere.

The significance of emotional labour as a concept is its specific applicability to women. It should not be thought, for instance, that the struggle for gay rights among cabin crew, or indeed wider issues of job insecurity that affected both men and women, are viewed as less important. Emotional labour is constructed implicitly around the appropriation of sexual difference and is thus by definition not gender-neutral. Women are employed to make use of their 'natural' skills. As Tyler and Abbott argue, "[f]light attendants are required to deploy skills and abilities which they are deemed to possess simply by virtue of their sexual difference from men" (Tyler and Abbott 1998). Often these 'skills' are deployed outside the formal contractual relations of exchange, yet are indispensable to those relations.

Token men

Although often research on under-representation has been done with women, more recently men in the minority have become a subject of interest as the number of men entering and succeeding in female-dominated occupation has risen. In pursu-

ing this newer line of research, some have questioned how the experiences of a minority of men working with a female majority would compare to those of a minority group of women working with a male majority. Research has shown that they do experience many of the same negative personal and occupational pressures associated with being a token that women experience.

Young and James (2001) show how the male flight attendants were less satisfied with their job and would be less attached to the organisation. Numerically rare male flight attendants perceive themselves to be different from the majority group of female flight attendants, and this perception of group difference significantly affects their attitudes to work through lowered self-esteem, increased role ambiguity and poor job fit.

With sex-typed jobs, organisations should try to decouple the requirements of the job from sex stereotypes about job holders. This would go a long way toward removing the automatic lack of fit for tokens in sex-typed jobs that proved so detrimental for male flight attendants in this study. Actively recruiting to equalise the representation of the sexes within the job would further the goal of removing sex-typing as well as reducing sex as a salient grouping dimension.

4.3 CHAPTER SUMMARY

This chapter has focused on the structural level of transport. The structural level is about gendered recruitment, promotion and work organisation at all levels, as well as women's and men's participation in and influence on decision-making, planning and policy. Obviously this is a huge area, and the chapter focused on gendered representation in the transport sector at policy levels, both in the EU and in selected member states. Further, the chapter presented available data on gendered employment in the sector at EU level and a mapping of research literature in relation to transport. This chapter documents that it is urgent that the structural level of transport is addressed from a gender mainstreaming perspective:

- At political as well as on research level, transport is an overwhelmingly male-dominated sector. At EU level, political committees in the transport sector as well as transport research and advisory councils have a low female representation. This also goes for transport-related committees at national level, with a notable exception. Sweden has a 50-50 balance in the Transport Committee.

- The most recent employment data from the EU shows that transport continues to be male-dominated. The research literature suggests that the transport sector is a gendered work space dominated by masculine values and practices. There is a need for organisations to decouple the requirements of the job from sex stereo-types about job holders. Further, inclusive work environments need to be created to support the employment of more women in the sector.
- There is a need for more data and analysis concerning the gendering of the transport sector at a structural level. Both in terms of basic knowledge drawing gendered representation and employment, but also about organisational processes and cultures and the ways in which the sector continues to be male-dominated. If the transport sector is to be competitive in a context of labour shortage, this is urgent.

NOTES

2. <http://www.europarl.europa.eu/activities/expert/committees/allMembers.do?committee=2426&language=EN> 18.12.06

3. <http://www.europarl.europa.eu/activities/expert/committees/allMembers.do?committee=2424&language=EN> 18.12.06

4. <http://www.europarl.europa.eu/activities/expert/committees/allMembers.do?committee=2434&language=EN> 18.12.06

5. According to the parliament website.

6. www.errac.org/members_1.asp 15.12.06

7. www.errac.org/organisation_representatives.htm 15.12.06

8. We could not find newer information about the gender balance in transport employment, which also means that the new member states are not represented within these statistics, but a shorter examination of employment by sex from 2005 shows the same picture.

5. Gender Mainstreaming Practises

James Etton 1941, TfL/London Transport Museum



In the previous chapter we looked at the knowledge that has been produced on gender, transport and mobility. This knowledge should – from a gender mainstreaming perspective – form the basis for political decision-making. In this chapter, we will look at gender mainstreaming in transport policy and planning. The first section will deal with the academic literature, the analyses of how gender has been or has not been integrated into policy and planning and how it might be done. The second section will present examples of how different entities have tried to mainstream gender in their activities or organisation.

5.1 GENDER MAINSTREAMING TOOLS

More specifically, in the gender mainstreaming literature and practice a number of policy tools have been developed. We mention these as they provide a good picture of the policy actions possible. In the discussion of gender mainstreaming in the transport sector, we will relate to these and see which have been used. Further, in our discussion of actual gender mainstreaming practices and knowledge we will also see which ones have been taken up. This will allow us to see in what ways gender mainstreaming is being implemented in the sector and to point to some suggestions for development. The tools of gender mainstreaming developed include:

“Gender-disaggregated statistics: The first is gender-disaggregated statistics. It is astonishing how few organisations use gender-disaggregated statistics as a management tool to review the effectiveness of their policies, to establish patterns in the allocation of resources, or to monitor performance, whether or not they are committed to gender mainstreaming. Gender-disaggregated statistics can be used for all three. Public sector authorities have a duty to know who benefits from their services and who does not” (Rees 2002).

“Equality indicators: Raw data even when disaggregated by gender, are of course limited in what they show. There is much work to be done in developing gender equality indicators. Baseline statistics are needed against which performance targets can be measured. But equality indicators are likely to be made up of a combination of variables. They are essential for benchmarking purposes, as raw data can be meaningless for making comparisons” (Rees 2002).

“Gender impact assessments: Gender impact assessments are designed to assess in advance the impact of any proposed policy (or indeed legislation) on men and women respectively and to address any undesirable differences that may be anticipated. Gender impact assessments are routinely used in some Nordic countries. The approach has been described as wearing a ‘gender lens’ or having a ‘gender reflex’” (Rees 2002).

“Monitoring, evaluating, auditing: Fourthly, gender monitoring, evaluation and auditing are essential. How can we tell if mainstreaming is delivering without monitoring, evaluating and auditing policies? Gender equality needs to be regarded as a performance indicator, and treated the same way for evaluation purposes as, say, balancing the books” (Rees 2002).

“Gender balance in decision-making: A gender balance in decision-making is needed to address the democratic principle of gender mainstreaming” (Rees 2002).

“Engendering budgets: Sixthly, budgets need to be ‘engendered’. This tool has been developed in Canada and again in Sweden and Norway in particular. It is legitimate to ask what proportion of public budgets are spent on men and women and indeed girls and boys respectively. One country found for example that ambulances, that are very expensive, are used disproportionately by men. It may be that this is regarded as an appropriate imbalance in use of resource, but equally, it might be argued that it is an imbalance that needs to be examined carefully. Above all, it is essential to have that data as a management tool to ensure resources are directed strategically and equitably” (Rees 2002).

“‘Visioning’: The final tool to be mentioned here is what I call ‘visioning’. It is probably the most difficult element of mainstreaming. Through it, we seek to understand and address how existing practice and institutional arrangements, however inadvertently, however subconsciously, disadvantage more women than men (or indeed, vice versa). Visioning is at the heart of mainstreaming. [...] There are other examples of visioning that address the gendered language used in institutions, such as that used in universities that award bachelors and masters degrees, and employ fellows and masters. Some initiatives are highly imaginative and reconsider the use of time, or public space, in gendered terms” (Rees 2002).

During the discussion we will return to these tools in relation to gender mainstreaming in the transport sector.

5.2 EXAMPLES OF PRACTICE

While it is easy to identify the problems that affect women and men in transport, it is more difficult to find examples where gender-aware principles have been incorporated into transport planning. As Greed (2006) and others have noted, the main problem (and argument) for gender mainstreaming is that there has been a plethora of recommendations but so little implementation. In this chapter we will highlight some examples of how gender issues can be integrated within transport programmes. We will relate these examples to the discussions in the previous chapters but not all themes are represented by an example of gender mainstreaming, either because we have not found any or because no approach currently exists in this specific area.

Though gender mainstreaming programmes are not many in the transport sector, some exist that are making a big effort to implement gender issues in transport policies and planning, as also in other transport-related areas. A lot of the programmes have similar perspectives and methods to gender mainstream transport. One example is the democratic involvement of citizens which is found in several projects, another is to pay attention to the diversity of the target group, a third to seek knowledge about the area and base the projects on this knowledge and a fourth to use networks to accumulate more knowledge.

The examples will mainly be concerned with projects related to policy and planning, but will also describe projects related to fear and safety issues, the integration of women in the transport labour market and the gendering of cars. Some of the examples cover more than one theme and will therefore be described through the chapter with different focus. This concerns for example Transport for London's different aspects of planning public transport. Other programmes are smaller and will therefore form a minor part of the chapter.

We will start with the theme that has the most examples, namely policy and planning.

5.2.1 Policy and planning

Most of the examples of gender mainstreaming in the transport sector that we have found are concerned with transport planning and originates from governmental decisions, thus accentuating the points made by the gender mainstreaming literature discussed in chapter 2 that mainstreaming needs commitment from leadership and management and explicit gender equality policies to happen. Traditionally, trans-

port design was developed to suit men, and the challenge is therefore to develop the transport system so that it is accessible to women, as well as other marginalised groups. This is one of the main themes in the examples in this section.

TRANSPORT FOR LONDON'S ACTION PLANS

Transport for London (TfL) is one of the authorities that has made an effort to gender mainstream their operations. The Mayor of London's Transport Strategy in which a commitment to equality and inclusion is made has a vision to deliver improvements to London's public transport system and a vision to make London a tolerant city with space for everybody. In 2004, TfL produced its first Women's Action Plan, *Expanding Horizons*. It set out what TfL considered to be the main transport issues facing women in London and explained what TfL was going to do to address them in the future.

TfL is working towards a transport system that meets the needs of all those who live in, work in and visit London and recognises that the diverse groups in the population of London have different lifestyles and therefore different transport requirements. TfL further wants to provide a transport system that is shaped by women's lifestyles and meets their needs in terms of greater personal security, flexibility, accessibility and affordability. TfL wants to build on its ongoing dialogue with women to explore their transport requirements in more detail and to assess the effectiveness of existing initiatives aimed at addressing women's barriers vis-à-vis using public transport.

The background for the Women's Action Plan 2004 was an awareness of the gendered aspects in public transport. Analysis of survey data showed that women make a big part of their journeys by public transport and make more trips than men, mainly due to a higher number of walking and bus trips. Women are therefore already heavy users of public transport. However, the message that was regularly heard from women was that they had to overcome several barriers to use the system. It also seemed that women were increasingly more prepared to turn to the car as a means of meeting their specific transport needs. In order to help build or renew women's confidence in public transport TfL wanted to understand the barriers women face and address their needs.

Since women make up just over half of the population of London, the point of departure was that any steps taken to meet women's transport needs will have many positive benefits for other groups such as black and minority ethnic groups, older

people, disabled people and children, and in areas including personal security and accessibility. Another important point is the diversity of London's female population, taking into account the minority ethnic groups, disabled people, elderly, etc. Attention was also paid to recognisable differences between women's transport demands and experiences as opposed to those of men, as it is considered important to deal with these differences without reinforcing stereotypes and appreciate that the issues faced by individual women can vary by journey and can be equally applied to some journeys made by men.

Currently, only a small percentage of London Underground train drivers, bus drivers and taxi drivers are women. TfL commits itself to establishing targets around increasing the numbers of women drivers. There are several initiatives in the action plan and we will only highlight a few here.

To lower the costs, fares for part-time workers and fares for families are introduced. As women are more likely to be part-time workers, one of the key actions within this area has been to address the inequalities in the current ticketing system. Working with the Chamber of Commerce and Parents at Work, TfL has piloted a concession fare scheme for part-time workers. New fares will increase the affordability of travelling by public transport for families.

TfL has undertaken research to understand the experiences and issues for people (primarily women) travelling with a buggy by bus. The aim of the project is to provide information and guidance about travelling with a buggy to customers, staff, bus operating companies and feed into bus design guidance. The film *How people do it: taking young children on public transport in London (2002)* made by Marie Lenclos (Centre for Inclusive Design, London) was part of this project and showed clearly how transport is not that accessible for women with children.

The awareness of possible impediments for some passengers includes step-free access, easing use of the network for disabled women and those travelling with children, shopping, luggage, etc. To ensure accessibility, training on the design of accessible transport environments – e.g. design, operational issues and staff training – will be delivered to transport planners, engineers and designers.

In order to be able to meet women's needs, TfL wants to cooperate with women and thus develop a relationship by proactively engaging with them to further understand their lifestyles, existing barriers to transport and travel aspirations. This will be done by consultations with women, and a consultation toolkit has been developed which challenges the reliance on traditional forms of consultation known to have excluded important sections of the population, including some women, and

provides practical advice to managers on more effective ways of engaging with women and their organisations. In this regard, a voluntary sector database has been developed through which women's groups have been contacted both across boroughs and London-wide.

As described, the vision in the Women's Action Plan 2004 is to meet the diversity of London's population. The action plan has a more specific focus on women, since research shows that women face several barriers in the transport system in their everyday life. In that sense, an important part of the action plan consists of paying attention to differences between men and women, but without reproducing certain stereotypes – an aspect which is made even more explicit in Transport for London's Gender Equality Scheme and Gender Equality Assessment.

The Equality Act 2006 mandated all public authorities to produce a scheme under their gender equality duty. The duty (which came into force in April 2007) requires all public authorities, such as TfL, to eliminate sex discrimination and sexual harassment and promote gender equality.

In order to produce the Gender Equality Scheme, TfL will liaise with local communities and listen to peoples' views in a number of ways such as seminars with key opinion formers, including partners at the Greater London Authority (GLA), the Equal Opportunities Commission (EOC) and the Fawcett Society as well as consultations with London-wide stakeholders and groups, customer research around London, one-to-one interviews with key opinion formers and lunchtime consultation events with TfL employees. Also, a questionnaire has been developed that focuses on what people think about transport in London. In this questionnaire it is possible to – voluntarily and confidentially – fill in equality monitoring information in relation to different social categories such as gender (including transgender), age, ethnicity, disability, religion and sexual orientation.

With the Gender Equality Scheme, Transport for London is making a structure for future projects aiming at gender equality. The programme identifies the specific goals and pays attention to discrimination of some of the target groups.

The purpose of the Gender Equality Assessment is to improve the work of TfL by making sure that it does not discriminate and that, where possible, it promotes equality and fulfils the duties under the Race Relations (Amendment) Act 2000.

This plan focuses on assessing and recording the likely equalities impact of a TfL strategy, policy, business plan or project. There is a focus on assessing the impact on certain groups of people known as equality target groups. It involves anticipating the consequences of policies and projects on these groups and making sure that, as

far as possible, any negative consequences are eliminated or minimised while opportunities for promoting equality are maximised.

TfL looks at two possible impacts in its assessments: a negative or adverse impact and a positive impact. The negative or adverse impact means that the impact could disadvantage one equality target group or some equality target groups. This disadvantage may be differential, where the negative or adverse impact on one particular group of individuals or one equality target group is likely to be greater than on another.

The positive impact will have positive results for an equality target group, or some equality target groups, or improve equal opportunities and/or relationships between groups. This positive impact may be differential, where the positive impact on one particular group of individuals or one equality target group is likely to be greater than on another.

TfL together with the Mayor, the GLA and other functional bodies have defined equality target groups as: women, black and minority ethnic people, young people and children, older people, disabled people, lesbians, gay men, bisexuals, transgendered and people from different faith groups.

The projects and policies which are seen to require an EQIA are for example the TfL Business Plan and all best value reviews and policies and projects that each of TfL's directorates identifies as requiring an EQIA as part of the business planning process each year. These should be policies and projects that are of relevance to TfL's duty to promote race equality. They are high-level functions, rather than support functions or subprojects, and are in their initial planning stage or undergoing a revision.

We would like to point out the strength of this programme's focus on the impact of the assessments since some possible disadvantages of the programmes will become visible. Through the Gender Equality Assessment, Transport for London will be able to evaluate the project's outcome and make sure that the positive results are maximised. As we will later return to, evaluation must be seen as an important part of the programmes of gender mainstreaming.

IRELAND: NATIONAL DEVELOPMENT PLAN (NDP)

– THE GENDER EQUALITY UNIT

Following the EU commitment to integrating gender equality in policy-making, some member states include transport policies in their gender mainstreaming efforts. This is for instance the case with the Irish National Development Plan (NDP)

2000-2006 where the Irish Government has adopted gender mainstreaming as a strategy to promote equal opportunities between men and women. A NDP Gender Equality Unit was established to provide support and advice for the work with gender mainstreaming and to outline the main gender equality issues in different policy areas. One of these is the transport sector.

The Irish Government bases its approach on recent studies that show that there are still important gender differences in travel patterns and transport use. This is seen to underline the need for policy-makers and transport operators to take account of the needs of both women and men when developing and implementing transport policies and services. The research that the plan is based on shows the same characteristics in travel patterns and transport use that were outlined in this report's chapter 3. Fewer women drive and own cars and are therefore more likely to use public transport. Further, men are three times more likely than women to die in road crashes and over four times more likely to be the drivers of cars involved in such crashes. Taking childcare and other dependent care responsibilities into consideration, women make more multiple trips on public transport facilities, bringing children to school or care, shopping, visiting elderly or sick relatives, where the main commute for men is the workplace. Women are more likely than men to work near their home and part-time because of caring responsibilities, and they are less likely to travel to leisure activities.

As indicated by research, mobility patterns have an influence on for example job opportunities, and the barriers described above are by the Irish Government seen to exclude women from full participation in economic and social life. The government therefore recognises the need for public transport that is comprehensive and responsive in terms of provision, and safe and affordable in terms of use. By taking account of the different needs and situations of men and women, policy-makers can ensure better policy targeting, more efficient delivery and greater equality. The vision is that if public transport makes the right connections, more women should be able to access jobs and training opportunities as well as leisure opportunities.

To successfully mainstream gender in the transport programmes of the NDP, the Irish Government recognises that a range of processes needs to be scrutinised. These include programme governance and decision-making structures, needs analysis and data collection, communication and consultation and measurement and reporting practices.

The need of programme governance focuses on the fact that mainstreaming requires that those involved in the process of managing and implementing pro-

grammes and policies know how to apply gender equality considerations and frameworks to that process. This requires needs analysis and data collection and highlights that the identification of patterns of gender inequality is an essential first step to developing targeted gender-oriented policies, introducing gender sensitivity into other policies and establishing baselines from which to monitor the gender-differentiated impact of programmes.

Communication and consultation are essentials to the programme since mainstreaming is based on the acknowledgement of the different needs, situations and resources of women and men, and therefore better policy targeting requires an input from both. This means building wider consultation and better communication into informing policy.

The perspective of measurement and reporting practices means that when having established the baseline situation and set targets, it is crucial that a rigorous and responsive monitoring system is put in place. Once the monitoring system is in place, it can benefit from ongoing modification.

The differences in men's and women's travel patterns form the background for the integration of gender mainstreaming in the Irish National Development Plan, thus highlighting the need for relevant knowledge about gender and transport and relevant sex-disaggregated statistics when mainstreaming. The NDP recognises that patterns of mobility influence other areas of life and can result in further inequality, for example by excluding women from the labour market. The vision to make an equal transport system is therefore not only seen as an improvement of the accessibility to transport but also as a way to make greater equality in other areas of life. This is an important perspective that we find in other programmes too.

SWEDEN: EQUAL OPPORTUNITIES IN THE ROAD TRANSPORT SYSTEM – GENDER EQUALITY IN ROAD PLANNING

As mentioned before referring to Polk's analysis on gender mainstreaming in Swedish transport policy, Sweden has a commitment to work with gender mainstreaming in all areas. In 2001, a new transport policy was adopted with a stated goal to create an equal transport system. The Ministry of Transport is working with different activities concerning gender and transport, such as research on travel patterns, interests, needs, safety, etc. These perspectives are implemented in the transport planning projects.

The government's vision is that men and women should have equal opportuni-

ties and rights in all areas of life. Equality in the transport sector is therefore a part of a broader policy on the gender area, and is in many ways seen as tool to support gender equality in everyday life: at work, in school and in leisure time. It is considered important to use a democratic strategy to consider both men's and women's interests, and the programme is therefore implemented through a dialogue with the population – sending out information and questionnaires to households and having public information meetings.

The target is to develop the transport system to make it more safe, accessible and equal when considering diverse interests of the citizens. For example, one aim is to be aware of children's needs. A direct target is to increase the number of women in the direction and project groups so that the working groups may have equal representation of men and women in the planning process. Another aim is to make equality and inequality visible to create knowledge about problems concerning transport. It is seen as important to work out descriptions of social consequences early in the project since men and women have different travel patterns, and the initiative will therefore not influence the users equally. It is further regarded as important to include these consequences for the users in the further implementation.

As in the Irish National Development Plan, Sweden's programme of gender equality within the transport system can be seen to promote equality in other aspects of life. We would furthermore like to highlight the democratic involvement of the target groups as something we consider to be an important reason for the success of the project. This perspective is also seen in the programme by the city of Freiburg of gender mainstreaming spatial planning as we will now turn to.

FREIBURG: LIGHT-RAIL EXTENSION ZÄHRINGEN

The planning of the Light-rail extension Zähringen in Freiburg is done as part of the GenderAlp!, which is a network of regions around the Alps working with spatial development from the viewpoint of equal opportunities between men and women. The City of Freiburg focuses on quality management in the planning process of a light-rail extension (Light-rail extension Zähringen) with a requirement-oriented and gender sensitive approach. The emphasis is put on the implementation of gender mainstreaming in the technical/planning departments of the administration, thus gender mainstreaming the planning process of the light rail-project in a comprehensive and systematic way. The target is an implementation of gender mainstreaming in urban and regional administrations focusing on spatial

planning. The projects should improve the public and individual transport and pay attention to urban development of the district centre while taking into consideration the district's social frame conditions.

The planning process will involve participation of citizens with a specific focus on gender aspects. Further, there will be exchange of experience with other Gender-Alp! project partners and impulses for training and further education. Results from the quality management can affect already current planning processes.

The long-term results to be expected from the project are a general implementation of gender mainstreaming in the technical/planning/construction departments of the administration. Another expected outcome is some guidelines for future planning processes which take requirement-oriented and gender sensitive aspects into consideration – thus achieving sustainable quality management, a set of training and further education modules on gender planning and an expert network in the partner countries for exchange of information, methods and innovations.

The intention is to work with the project on different levels. On the administrative level (internal) there will be meetings of the department-spanning working group, AG GenderAlp! On a regular basis, the vision is to build up a network and to feed back to the departments and the administration. There will be information of the administration staff (meetings, reports, intranet) and of the city council. The project will work on a special edition of the city administration's paper *Amtsblatt* to all households in Freiburg and make workshops with members of the city council, citizens and representatives of citizens' organisations (NGOs). An effort will be made to give qualification and further education of the working group members, as there should be an evaluation and elaboration of frame guidelines for the planning processes.

The aims on the regional level (general public) are to charge an external consultant accompanying the project, do media information preceding workshops with members of the city council and representatives of citizens' associations (NGOs) and workshops with citizens embedded into the planning process Light-rail extension Zähringen. For example, there are articles in the *Stadtteilblatt Zähringen*, which is the district's monthly report and the mass media is used.

On EU level, the visions are to exchange information and experience with the other EU project partners as well as with experts and experts' associations on a national and a transnational level (e.g. conferences, meetings, reports). There should be cooperation with the other project partners in EU-WP 7, building up a transnational network, and information on the world wide web.

The exchange of experiences and information from other projects can facilitate a successful implementation of the programme. This is further strengthened by the vision to work through networks and thus reach experts in that field as well as the population of Freiburg.

MUNICH: THE TRANSPORT DEVELOPMENT PLAN

Another German example of an action plan which has a gender approach in transport planning is Munich's Transport Development Plan. The plan is part of a 10-15 year framework for traffic development in Munich. It was approved in 2006 as the core project of the urban development programme 'Perspective Munich', and the plan can be seen as a comprehensive general management concept presenting the aims and strategies of urban development in relation to traffic in Munich. The plan serves as a guideline for responsible authorities in politics and planning as well as for institutions, businesses and residents.

Munich recognises that the growing population and increased availability of jobs necessitate extensions of the public transport and road networks. The underlying vision is therefore to improve traffic in the future. The motto "To maintain and improve mobility for all road and transport system users and manage traffic and transportation to the benefit of the city" describes this vision. The aim is to reduce traffic and manage the shifting traffic. The implementation takes into account issues such as gender mainstreaming (i.e. consideration of the specific needs of women as transport users) and the accessibility of the transport system to people with disabilities.

Though the gender perspective does not form a very big part in Munich's Transport Development Plan, it recognises, as described in the latter programmes, the need for gender mainstreaming in transport planning in relation to other aspects as for example job opportunities. By this perspective we want to highlight how an approach of gender equality in transport planning not only should be understood as related to travel and transport, but also as a question of a broader vision to give equal opportunities to all groups of people in everyday life.

5.2.2 Fear and safety

Transport as a daily practice means good and bad experiences – something which affects women's travel patterns as we discussed in chapter 3. That women's mobility can be restrained by fear of certain places means that there is a need to integrate

this perspective in the development of the transport system. This part will focus on projects trying to reduce women's fear by paying attention to different environments which can produce a higher feeling of safety.

TRANSPORT FOR LONDON: WOMEN'S ACTION PLAN 2004

The development of safety is an important task in Transport for London's Women's Action Plan 2004. TfL wants to provide a transport system that improves real and perceived personal security. The projects focusing on greater personal security are made to provide safer travel options for women at night, encouraging them to use public transport at times they would normally avoid or take journeys that they would only normally consider making by car. The attempt is among other things to increase the feeling of safety by more visible police presence and secure car parking. Further, the focus is on increasing CCTV coverage and availability of Help Points across the network and improvements to waiting areas facilities such as lighting in order to provide reassurance to women using public transport, particularly when travelling alone or after dark.

In addition to security enhancements to the waiting environment, increased frequency of service will reduce waiting times and alleviate the anxiety that can be experienced when waiting for transport services. Real-time information and information on safer travel options are also part of improving the levels of security.

SWEDEN: GENDER EQUALITY IN ROAD PLANNING

Sweden's programme on gender equality in road planning also has safety as a central target in the development of an equal transport system. The project recognises that women more often than men feel insecure in public places and an aim is therefore to create more safety, for example within public transport (safe bus stops, etc.) which women use more than men. Research is carried out to pinpoint what is considered unsafe places, and a checklist of 'insecure' environments in traffic – concerning dark areas, industrial areas, deserted places, etc. – is made and will serve as a guideline for improvements in these areas.

That the transport system is safe to use for all people means equal access to travel. Knowledge about how to make environments which are considered safe and the implementation of this knowledge is therefore an important aspect of providing a transport system that will provide equal opportunities for everybody. The Women's

Action Plan 2004 and Sweden's programme on gender equality are good examples that show the importance of including fear and safety issues when working for an equal transport system. Another theme related to a safe transport system is risk and safety, which we will now turn to by discussing some recent examples of campaigns urging younger men to change their driving behaviour and attitude.

DRIVING, RISK AND SAFETY

There are several programmes within the 'driving, risk and safety' framework, mostly campaigns about not driving under the influence of alcohol and observing the speed limits, and the campaigns are often directed at younger men who make up the majority of people involved in car accidents. Newer research shows that traditional campaigns have not reached the men, which recently led to a shift in campaign expression which is rather problematic seen from a gender equality perspective.

In order to reach the young male drivers, The Council for Road Safety in Denmark produced an Internet campaign called 'The Speed Control Bikini Bandits' showing topless women standing by the roadside and holding up traffic signs. This campaign was much debated and criticised by women's groups and politicians who found it condescending to both women and men and reproducing gender stereotypes. The council and the Minister for Gender Equality, however, saw the campaign as fun and ironic and as a way of giving the council goodwill and respect among the young men.

The debate about this campaign shows how a focus on gender need not entail any vision of gender equality, but it also highlights how projects with a focus on one particular group can have a negative effect on another by for example reproducing some images which are discriminating. These examples further show the ambivalence between the visual culture of transport which depicts the relation between men and cars as linked to a fascination of speed and danger, and the programmes of driving safety which are trying to present the opposite picture. We suggest the need for a more nuanced image of men's and women's roles in relation to the car and traffic as a whole.

5.2.3 The gendering of cars

As seen in the visual culture of transport, women traditionally stand for the passive and incompetent in relation to cars, whereas men have an active role as the control-

ling figure. Traditionally, car design has not addressed women, and women have if anything been excluded in the technological development of the car, based on the thinking of women as the opposite of what the car stood for: The masculine mastering project.

As Berger argued (see chapter 3), issues that were seen as feminine such as safety, convenience and cleanliness were neglected in relation to cars, and improvements which could benefit both men and women were ignored with reference to femininity. However, these issues are exactly the essence of a new project done by Volvo called Your Concept Car (YCC).

Volvo has a long-standing tradition of listening to what women want. In the 1980s, a women's reference group was formed, where female staff were called upon to test and assess new models at an early stage of their development. In 2001, the idea of an all-woman team making all the decisions in the development of a new concept car at Volvo arose. After a series of preliminary studies, the project was given the go-ahead by Volvo Cars Management Team in December 2002. The group got free hand to develop a concept car which could meet what was described as 'the most demanding Volvo customer category of all – the independent female professional'.

The background of the YCC project was that women form an increasingly important customer group for Volvo Cars. In the U.S., 54% of all Volvo buyers are women, and in Europe, too, the percentage of female customers is growing steadily. The idea was to design a car for women, designed by women. The YCC team was made up of women in all areas: technical experts, designers, communications managers, etc., in order to make sure that the woman's perspective was held all the way through.

In the process of designing the car, Volvo looked at the user's needs. When asking women, the research showed that they were more demanding than men. Besides the prestige, style and performance issues that also men are concerned about, women focus on smarter storage solutions, a car which is easy to get in and out of, which has a good visibility, is easy to personalise, involves minimal maintenance and is easy to park. The design also focused on differences in bodies, designing the seat belt and the headrest after women's bodies and needs.

The car was presented at a car show, but remains a concept and has therefore not been put into production.

Though the vision was to create a car for women, the hope was to reach men too. The starting point of the whole project was that if and when you meet the needs of

women, you will reach the men too. This example is interesting seen from the traditional point of view on how to understand cars. It not only shows how femininity can play a role in a traditionally male-dominated area, but also how this design which is considered feminine can benefit not only women but also men – something which has been ignored up until now. We will discuss the male-dominated image of travel and transport further in the next chapter about the transport industry.

5.2.4 Employment

The transport industry has for a long time suffered from an image of male dominance almost entirely based on long-standing perceptions, attitude and culture. The stereotypical view of the majority of the industry as being ‘unsuitable’ for women due to the dirty, noisy environment and strength-related work has caused many women to be reluctant to even consider a career in the transport sector. These stereotypical images are fixed in the minds of others both within and outside the industry, something which poses a challenge to changing values and making the industry accessible to women too. As we showed in chapter 4, this has caused an actual male dominance in both decision-making and employment. We will here highlight some projects that are trying to integrate women in the labour market of transport: The Fuirich Transport Development Partnership, Volvo’s SNS project and again a part of Transport for London’s Women’s Action Plan 2004.

FUIRICH: TRANSPORT DEVELOPMENT PARTNERSHIP – WOMEN INTO TRANSPORT

The Fuirich Transport Development Partnership (FTDP) has been established to champion the case for the inclusion of more women in the transport industry in Great Britain. The FTDP project is part-funded by Equal, which is part of the European Social Fund’s Community Initiative Programme.

The government’s National Office for Statistics in Great Britain has predicted that only a smaller part of the workforce in 2010 will be white, male, able-bodied and under the age of 45, and that women will comprise up to fifty per cent of the population and increase in the workforce, meaning that a lot of new jobs are predicted to go to women. Ethnic minorities will also form a big part of the workforce in key metropolitan areas. There will, in other words, be a need to give access to the

under-represented groups in the motor industry to be able to meet future perspectives.

The FTDP project aim is to change the perception of the motor industry as only suitable for men, both for the benefit of women and the industry itself which, if it does not diversify, will face difficulties in meeting the challenges of modern society.

The objective of the project is to widen diversity within the transport sector, by changing attitudes, culture and behaviour, both internally and externally to the industry. The hope is to bring in new ideas and perspectives, getting access to a wider range of talents and to multi-cultural and gender markets, improve the companies' images and understand the customers better.

The aim for the three-year project is to conduct research, develop programmes and train staff to combat gender imbalance in the transport industry. FTDP is working together with the motor industry to introduce a best practice in the workplace, particularly relating to equality and diversity and positive discrimination.

The activities in the FTDP project are based on women's participation. The strategy is to learn from women's experience with the motor industry, partly through case studies and partly from workshops, and to educate women to assist other women in the male-dominated environment. Based on this information, the FTDP project developed a mentor support system. Further seminars, conferences and other events are held to promote career opportunities and skill requirements of employees within the motor industry and to exchange experience on a transnational level.

We would like to pay attention to how the Fuirich Transport Development Partnership recognises several important perspectives to mainstream gender in the transport industry: the involvement of women and their experiences, the use of networks to produce and exchange knowledge and giving information to the target groups.

VOLVO: THE SNS PROJECT – MORE WOMEN IN LEADING POSITIONS WITHIN THE VOLVO GROUP IN SWEDEN

The Volvo Group has a working committee with the task of ensuring that more women are given leading positions in trade and industry. The committee has been working with a project initiated by the SSN, the Swedish Centre for Business and Policy Studies; a project that is now being implemented within Volvo. Recognising the importance of leadership commitment in the promotion of gender mainstreaming, the Volvo Group CEO is a member of the committee.

The purpose of the project is to create greater opportunities to adapt Volvo to all the varied demands of the market. The starting point is that a more balanced number of male and female workers respectively provides Volvo with an efficient means to reach their goals. A wider recruitment selection for leading positions increases group dynamics, creativity and new approaches in management teams and the organisation, which increases the competitiveness of Volvo.

The objective of the project is to use knowledge, information and inspiration to increase the number of women in leading positions within the Volvo Group. The main task of the project team is to spread and integrate activities with the purpose of increasing the number of women in leading positions. Through its coordinating role the project team can promote a common approach and knowledge base within the Volvo Group.

The implementation is assisted by a network whose participants are thought to be communicative messengers both to and from the network and with local steering committees/top management spreading news of ongoing activities, reviewing activities related to diversity within their own local organisation and setting a good example as well as being interlocutors within the organisation.

The network has a vision to work with areas such as equality and gender, career development, ratio of management candidates, advancement and recruitment.

To broaden the recruitment base and facilitate female careers, Volvo strives to always include female applicants amongst the final candidates to senior positions and to allow variations in job profiles. Further, they will expose skilled co-workers to participate in at least one external board and encourage and facilitate membership. To nurture the right attitude and enable co-workers to combine private life with a business career, Volvo strives to achieve the best possible conditions for parental leave, implement training blocs in diversity in all leadership programmes and facilitate flexible ways of working by focusing on results rather than forced working hours.

This Volvo programme aiming to get more women into the trade and industry clearly shows how women are considered to play an important part in meeting the market demands. The future transport market is not as homogeneous as traditionally, and this acknowledgement means that the transport sector will have to be attractive for a broader group of people if it is to meet the future challenges. As we shall see now, Transport for London is working with a similar vision to recruit more women for the transport labour force.

TRANSPORT FOR LONDON: WOMEN'S ACTION PLAN 2004

Transport for London Women's Action Plan 2004 also has the integration of more women in their own labour force as a target. A Women's Network was set up in March 2003 for female employees to discuss issues of common interest. There are projects which should feed into the implementation of policies and practises practices that increase the recruitment, retention and promotion of women in the workforce at all levels of the organisation. TfL already offers flexible working in many parts of the organisation allowing staff to balance their working life with family or caring responsibilities. In addition, TfL wants to offer more child-friendly work packages and childcare vouchers.

TfL is actively targeting women in the recruitment process. The ultimate goal for recruitment is to increase the number of women working for TfL in alignment with the London population (currently 52%) at every level of the organisation, from operational to senior management posts.

A strategy called the 'Resourcing Strategy' will address the lack of diversity in the current workforce. The strategy will be based on positive action to increase the recruitment, retention and promotion of staff currently under-represented within the workforce and will include targeting of women to improve their existing profile within the organisation alongside other equality target groups.

5.3 CHAPTER SUMMARY

This chapter has mapped a range of different gender mainstreaming practices, documenting exactly how diverse such initiatives are.

- Firstly, it is important to point out, that while initiatives are being taken in the sector, the actual number of gender mainstreaming strategies and projects are very limited, giving a limited base from which to assess and learn from.
- Actual gender mainstreaming initiatives in the transport sector address a wide range of themes as well as policy levels. They relate to planning and policy, safety issues, gendering of technology as well as employment. It is positive to see how these examples focus on and implement the gender equality perspective in all sorts of transport programmes; it shows the wide range of initiatives that have been taken. For example, explicit gender policies have been formulated at national level in Swe-

den and Ireland, as well as regional level in Germany. Gender mainstreaming plans have been made by public transport companies such as London Transport, involving both analysis of gendered use of transport and adapting provisions accordingly. Issues of safe travel options in public space are addressed in Sweden and UK. In the private sector Volvo has explicitly used women designers to develop the car from women's perspective. Both public and private companies in UK, Germany and Sweden have developed plans to promote gender equality in the work force.

- There is a lack of systematic methodologies which incorporate gender analysis in transport policy and planning. Of the gender mainstreaming tools, versions of 'gender impact assessments', 'monitoring, evaluating and auditing' as well as 'gender disaggregated statistics' are some of the gender mainstreaming tools that are currently being used. While a systematic approach to impact assessment has been developed by Hamilton and Jenkins in a UK context, the gender resources, instruments and methodologies remain underdeveloped. To a very limited extent transport providers such as Volvo have addressed the issue of gender balance in decisions-making. With regard to gender-disaggregated statistics, this is a first step to review policies, while some transport providers do collect such data, there is an acute lack of comparative and uniform gender-disaggregated statistics available in this sector. With regard to the more advanced gender mainstreaming tools such as gender budgeting and visioning, they are not in use in the transport sector.

- New gender mainstreaming initiatives need to be taken, and existing initiatives must be evaluated to develop programmes further, and from that develop measures and successful methods to mainstream gender within transport areas. This demands initiation of European networking and information sharing for practitioners and researchers.

6. Policy Recommendations

Lobdan 1958, TfL/London Transport Museum



The outcome of Transgen is the launching of the following policy recommendations that are all vital to enabling the transport sector to respond to the challenge of gender equality as well as the challenge of greening and making the sector sustainable.

- Gender mainstreaming transport implies an explicit gender focus on the ways in which overall priorities in transport are made. High-level strategic policy-making should include and address the issue of gender equality and sustainability simultaneously and assess how they influence each other.
- Explicit gender equality policies in the transport sector need to be developed at national, regional and EU level: both in terms of women's representation and in terms of gender dimensions in the transport sector. 'Adding' women is necessary, but not sufficient.
- Mainstreaming gender equality into transport policy should consider how transportation affects women and men. Accordingly, future transport policy should emphasise accessibility as well as with mobility.
- Traffic planners and policy-makers need to take into account gender from a user perspective and to integrate women's values, needs and interests in transport policy, as well as incorporate the voices of women users in planning.
- Mainstreaming gender equality into the transport sector should focus on the political and organisational elements in public and private transportation structures. Equal representation in decision-making at all levels needs to be ensured.

GENDER, TECHNOLOGY, TRANSPORT AND SUSTAINABILITY LAUNCHING OF A EUROPEAN PLATFORM

- There is need for more data and analysis concerning the gendering of the transport sector at a structural level: both in terms of basic knowledge drawing gendered representation and employment and about gendered organisational processes and cultures, and the ways in which the sector continues to be male-dominated.

- In order to develop and implement gender mainstreaming in the transport sector, the knowledge base needs to be extended and improved substantially. New research programmes that focus on transport in broader frameworks of rights and duties, of values and cultures, of structures and identities as well as the production of new technologies and their implementation need to be launched.
- In order to bridge the gap between science, policy-making and implementation, there is a need for a broad conference in the framework of the EU Parliament and/or Commission. In addition, there is a need to launch a European Union-based platform of gender, technology, transport and sustainability. The aim of the platform is to:
 - Create synergy between already existing, but divided fields of science, policy-making and innovation.
 - Initiate gender mainstreaming of strategic and political initiatives: the EU/FP 7 research programmes in particular.
 - Boost new knowledge-based technologies and innovations.¹

NOTE

1. This is in line with the suggestions in the *Renewed EU Sustainable Development Strategy. Council of the European Union*. 10117/06. June 2006.

APPENDIX A

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APPENDIX B

EXPERT WORKSHOP

As part of this Special Support Action, an international expert workshop was carried out in Brussels in June 2007. This appendix contains programme, list of participants, summary and photos from the meeting.

The Co-ordination for Gender Studies in Denmark

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The co-ordination is in charge of initiation, internationalisation, and dissemination of gender research

TRANSGEN – GENDER MAINSTREAMING EUROPEAN TRANSPORT RESEARCH AND POLICIES in cooperation with DANRO – danish EU Research Office, Brussels

EXPERT WORKSHOP

A NEW GENDERED TRANSPORT ARCHITECTURE FOR EUROPE

14 June 2007

DANRO – Danish EU Research Office, Rue du Trône 98B, Brussels

PRELIMINARY PROGRAMME

- | | |
|-------------|--|
| 10:00-10:30 | Registration and coffee |
| 10:30-10:45 | Welcome
<i>By Johannes Klumpers and Claus Christiansen</i> |
| 10:45-11:30 | TRANSGEN – Gender Mainstreaming European Transport Research
and Policies. Overview over the TRANSGEN project
<i>By project staff</i> |
| 11:30-12:15 | Transport and gender: overview and challenges of an emerging
research field
<i>By Professor Dr. Margaret Grieco, Napier University, Scotland</i> |
| 12:1-13:00 | Mobility, aesthetics and gender: a perspective from cultural studies
<i>By Dr. Ossi Naukkarinen, University of Art and Design Helsinki, Finland</i> |

13:00-14:00	Lunch
14:00-14:20	Policy and gender mainstreaming <i>By Merritt Polk, Göteborg University, Sweden</i>
14:20-14:40	The ICT revolution: What are the consequences for the research agenda of gender and transport? <i>By Dr. Randi Hjorthol, Institute of Transport Economics, Norway</i>
14:40-15:00	Including women in R&D in the transport sector: an example from the railway sector <i>By Dr. Marina Fracchia, NITEL, Italy</i>
15:00-15:30	Coffee
15:30-15:50	Film: How people do it: taking young children on public transport in London <i>By Marie Lenclos, The Helen Hamlyn Centre for Inclusive Design, London</i>
15:50-16:10	User-friendly innovation: Your Concept Car <i>By Eva-lisa Anderson, Volvo</i>
16:10 - 16:30	NEW Book presentation: Gendered mobilities <i>By Tanu Priya Uteng, Norwegian University of Science and Technology, Norway</i>
16:30-17:30	Panel discussion: A New Gendered Transport Architecture for Europe?, <i>Panellists: Professor Dr. Petter Næss, Aalborg University, Denmark, NN, Member of European Parliament, NN, Directorate-General Energy and Transport.</i>
17:30-18:00	Conclusion
19:00	Dinner

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LIST OF PARTICIPANTS

YCC Project Manager	Eva-Lisa Andersson	Volvo	Sverige
	Jonas Bak	DANRO- Danish EU Research Office	Denmark
Student	Michala Breengaard	University of Copenhagen	Denmark
Head of Department	Thomas Alslev Christensen	Danish Ministry of Science, Technology and Innovation	Denmark
Co-ordinator, Associate Professor	Hilda Rømer Christensen	University of Copenhagen	Denmark
Project Manager	Emmanuelle Causse	European Platform of Women Scientists	Belgium
Head of Policy and Strategy	Stephen Golden	Transport for London	United Kingdom
Professor	Margaret Grieco	Napier University	Scotland
Assistant to MEP	Signe Gaarde	European Parliament	Denmark
Chief Research	Randi Johanne	Institute of Transport	Norway
Sociologist	Hjorthol	Economics	
Student	Mathilde Holmen	University of Copenhagen	Denmark
Head of Section	Niels Harne	Transport- og Energiministeriet	Denmark
	Graziella Jost	European Transport Safety Council	Belgium
Head of Unit	Johannes Klumpers	Directorate-General for Research (Scientific Culture and Gender Issues)	Belgium

Research Programme Officer	Per Kruppa	Directorate-General for Research (Aeronautics)	Belgium
	Marie Lenclos	The Helen Hamlyn Centre for Inclusive Design	England
Research Programme Officer	Maria Cristina Marolda	Directorate-General for Research (Surface Transport)	Belgium
Policy Officer	Stefano Martinelli	Directorate-General for Employment, Social Affairs and Equal Opportunities	Belgium
Head of Research	Ossi Naukkarinen	University of Art and Design Helsinki	Finland
Professor	Petter Næss	Aalborg University	Denmark
Researcher	Helene Oldrup	University of Copenhagen	Danmark
Researcher	Merritt Polk	Göteborg University	Sweden
Head of Unit	Luisa Prista	Directorate-General for Research (Surface Transport)	Belgium
Project Manager	Helle Poulsen	University of Copenhagen	Denmark
Head of Section	Sine Uhd Rønberg	Department of Gender Equality, Ministry of Social Affairs	Denmark
Intern	Marianne Rasmussen	European Women's Lobby	Belgium
Researcher	Anu K Siren	Danmarks TransportForskning	Denmark
Equality Adviser	Kirsteen Singers	Transport for London	United Kingdom
Professor	Jane Summerton	Linköping University	Sweden
Project/Process Officer	Karen Slavin	Directorate-General for Research (Scientific Culture and Gender Issues)	Belgium
Member of the European Parliament	Britta Thomsen	European Parliament	Denmark
Research Fellow Science and Technology	Tanu Priya Uteng	Norwegian University of	Norway
Junior Project Manager	Sandra Vingerhoets	International Union of Public Transport	Belgium

**INFORMATION EXCHANGE, DISCUSSION AND NETWORKING AT
THE TRANSGEN EXPERT WORKSHOP IN BRUSSELS, JUNE 2007.
SUMMARY: EXPERT WORKSHOP IN BRUSSELS 14.06.07**







Welcome by

Johannes Klumpers, DG Research, European Commission and Thomas Alslev Christensen, Danish Ministry of Science, Technology and Innovation

Johannes Klumpers from DG Research welcomed the workshop participants by talking about goals of gender mainstreaming in the transport sector. He presented two goals, where the first was a larger representation of women in the transport sector and the second the need for gender mainstreaming in the transport system.

Klumpers pointed out that transport policies and research have to pay attention to gender issues if a gender mainstreaming is to succeed, but he also made clear that there are still problems with the implementation of gender mainstreaming: 85 % of work programmes in EU research in general have neither paid any attention to nor taken account of gender.

Therefore there is a need for researchers from the scientific field to contribute with their knowledge, Klumpers concluded, since gender issues vary with each project, and gender mainstreaming can not be carried out in isolation. The goals be obtained Only if we have the right knowledge.

Next, Thomas Alslev Christensen from the Danish Ministry of Science, Technology and Innovation welcomed the workshop. He pointed to Transgen, with the focus on people and not only technology, as a good source of inspiration for him self and for the further innovation projects in the Ministry of Science, Technology and Innovation.

Gender Mainstreaming European Transport Research and Policies:

Presentation of the Transgen project by

Helene Hjorth Oldrup and Helle Poulsen, Department of Sociology, University of Copenhagen

Helene Hjorth Oldrup began her presentation of Transgen by showing some gendered statistics from the transport sector in the European Union. She next explained the mapping in the project, thus defining the field, and how to build up a bibliography of existing literature in the field. The sections in the mapping were briefly presented, and in relation to this it was explained how the different topics might be gendered. Hjorth Oldrup closed her presentation by placing emphasis on the lacking focus on gender in transport research, and how existing research was characterised by being fragmented and undeveloped.

Next, Helle Poulsen presented the gender screening which is another part of the Transgen project. She pointed out how the European Transport committees have a very small rep-

resentation of women. The same goes for the national level where for instance in Denmark The Traffic Commission, the Parliamentary Traffic Safety Committee, and the new Infrastructure Commission show the same patterns. Poulsen explained why this male dominance is problematic when it comes to gender equality: it entails a lack of democracy, efficiency and female values. Transport is not just research, but something people use, and half of these people are women.

Transport and gender: overview and challenges of an emerging research field by
Margaret Grieco, Transport Research Institute, Napier University, Scotland

Margaret Grieco began by presenting the problems related to the lack of gender mainstreaming in transport programmes and pointed to the ways in which the transport profession is ignoring gender aspects. Where the basic framework literature is in place, the policies do not take the research about gender and transport into considerations. She explained how this is not only a problem in the older traditional programmes, but also in the contemporary ones which consider gender to be without significance to transport policies. The existing gender policy tools are not yet widely used within the relevant institutional planning and professional communities. According to Grieco, the task consists in making these tools available to the managers of the transport projects.

Grieco exemplified the lack of gender perspective with 'The Gender Bus' project – a walking bus taking children's health and the environment into account, but leaving out the consequences for women. Research shows that women meet more time pressure and stress in transport – something which is relevant for transport programmes to consider in their further planning.

The problem in implementing gender aspects is the low representation of women in projects and that gender is not a part in all policies. Grieco talked about how it should be a matter of strict institutional protocol that projects and policies are not funded without a gender equal representation.

She next talked about problems within the household waste reduction in relation to transport. People without a car have no possibilities to drive the waste away themselves, and because waste is not collected very often, the accumulation of waste is a problem. This is the case for families with children in particular, since they produce more household waste. Grieco drew attention to the fact that part of the problem is that food and other consumer goods are wrapped in too much plastic and paper packing.

She closed her presentation by placing emphasis on how important the Transgen project

is, since the focus on gender and transport has been neglected. The EU has pointed out that gender bears significance, though the member states still have a very long way to go in embracing the perspective. With Transgen, the EU has the opportunity to systematise the approach and to incorporate it into the field of operational and professional practice.

Mobility, aesthetics and gender: a perspective from cultural studies by

Ossi Naukkarinen, University of Art and Design Helsinki, Finland

In Ossi Naukkarinen's presentation, he directed our attention towards the fact that the understanding of transport can only be achieved if several perspectives are combined. These include equally valuable studies from the point of view of history, social sciences, economy, technology and philosophy. Such studies require open-minded research groups and networks. Naukkarinen pointed out how special attention should be invested in gender issues in transport and mobility. One of the first tasks is to identify gender-related phenomena in the field.

Naukkarinen then presented an aesthetic perspective on gender and transport themes. He explained how the aesthetics can be seen as a part of the modern mobile culture, contributing to freedom and efficiency, but also to pollution and other negative outcomes. A positive side of the mobile culture is its aesthetic value. Naukkarinen defined the aesthetic value as a sensual, bodily and emotional tie to mobility, personal liking and pleasure. Furthermore, it is connected to habits and routines, which are hard to dismiss when they are incorporated. He pointed to some important questions to be answered in relation to mobility, aesthetics and gender. For example, it is relevant to ask whose system it is, for whom it is built and whose mobility is in focus.

Naukkarinen concluded that aesthetic values make mobility attractive, but that some of the forms of mobility are highly gendered. There are variations of mobility that are masculine and only few which are feminine. The aesthetic mobility culture seems to be gendered in a masculine way, and the masculine signal in a lot of mobility culture – skating, racing, motorbikes – is excluding women. It is necessary to use this knowledge as one tool in creating mobile systems.

The vital links between gender equality and sustainable transport futures by

Merritt Polk, Human Ecology Section, Göteborg University, Sweden

Merritt Polk presented some topics of gender and sustainable transport. Polk supplied examples from the Nordic countries where the Swedish government put included in gender equality as the 6th goal of transport policy. One reason for the Swedish policy was the government's focus on the users of transport. The vision is now that transport should solve both men's and women's needs. Still the transport sector is one of the most male-dominated sectors in the Swedish society, and gender equality is still not seen as relevant within the transport sector in Sweden.

Polk emphasised that the transportation system should be designed to fulfil both women's and men's travel needs. Women's and men's values must be accorded the same weight and must be given the same potential to influence the establishment, design, and administration of the transport sector.

The fact that women and men have different travel patterns results in different environmental and social impacts. Research has shown that women and men have different experiences and valuations of transport infrastructure, travel modes and priorities for the future. The classic differences between men's and women's travel -patterns are that men travel longer, faster and that there are big differences between men and women in attitude and behaviour regarding speed. Polk proposed that women's traffic behaviour stands as the norm since it fits the values we have in society about e.g. safety better. A transport sector where women's behaviour and values are the norm would have reduced environmental degradation, traffic-related accidents and deaths. If women stand as were the norm, the greenhouse gas emissions and local pollution would be reduced. It would mean that participation would be increased and that quality of transport would be better.

Polk concluded her presentation by questioning why the goal of gender equality in transport has not been achieved. She answered that the problem is that it is not considered relevant. There is a big lack of basic knowledge regarding gender in the transport sector, but the gender perspective is necessary if the transport system is to improve its quality. Including this perspective will promote a more gender equal society and result in a more sustainable transport system.

The ICT revolution: what are the consequences for the research agenda of gender and transport? by

Randi Hjorthol, Institute of Transport Economics, Norway

Randi Hjorthol paid attention to the societal gender relations, i.e. the social context between transport and ICT. She pointed to the fact that gender equality in transport is mainly seen in relation to the labour market, and that women have less action space, less access to car(s), and that they walk more and use public transport more often than men.

Hjorthol explained how the interaction between transport and ICT means that new technology replaces the use of transport, changes people's behaviour – exemplified by for instance internet shopping – and supplies information faster and in much more detail.

Mobile phones are getting more and more popular with children, in particular children with divorced parents, where the mobile phone becomes the lifeline to both parents.

ICT instead of transport was optimistic news some years ago. It was predicted to, result in improved access to education, health services, etc., but we now see how there is also negative implications of the higher degree of ICT. There is an interaction between the effects, which can change the life of the individual and the family. ICT is for example gender divided and does not lend women the same opportunities as the ones men enjoy. Hjorthol concluded by saying that research in the area is needed to develop a new program based on this knowledge.

Expanding Horizons – Transport for London's approach to Gender Equality by

Stephen Golden, Transport for London

Stephen Golden from Transport for London (TfL) presented the goals and projects of TfL. Transport for London was founded in 2000, and is responsible for the whole transport system in London: the tube, buses, taxis, trams, cycling and walking possibilities, river services, major roads, etc.

Golden pointed out how TfL has realised that research is very important for transport planning, since if the research is unavailable, the programmes can not be developed or implemented. The social aspects need to be included for the transport system to be accessible to all citizens. Statistics on women in London show that 25 % of their journeys are made by bus. Rail and underground are mainly used by women without children. Asian women in London are less likely to drive or use the public transport than other ethnic groups, which can result in social exclusion. Transport is an enabler of both greater equality and social inclusion.

At the moment, the transport system is more favourable to men than to women. The system is designed by men, which means that the transport system is developed to fit men. For example, transport is designed to run from the outskirts to the city centre, which traditionally characterised men's working habits, whereas women's need is to move around within the city centre. Golden emphasised the fact that we have to think different and start favouring projects that target women.

Golden next turned to TfL's achievements so far, which include step-free buses, more staff, extra police, safer travel at night strategies and free travel for children under the age of 16 (18 years if attending full-time education), focus on low-income families, real-time information at bus stops, etc. He concluded by describing future plans, which will engage and involve women further and ways in which to keep up-to-date on women's views and conduct research.

How people do it: taking young children on public transport in London by

Marie Lenclos, the Helen Hamlyn Centre for Inclusive Design, London

Marie Lenclos presented her film *How people do it: taking young children on public transport in London* from 2002. Transport for London played a role as a research partner in the project, and the film – which was also used by TfL – focuses on the users of transport in London; more specifically on women who travel with children. Lenclos explained how she got inspired by her own experiences travelling with her daughter in London. Though the system has changed since 2002, it still takes a lot of courage travelling with children, and a lot of stress is entailed. The transport is not accessible for to women with children going for food shopping, etc.

The general images and conclusions of the film were that for a large part of the population in London, getting around is very difficult, if not impossible. Lenclos related to her own experiences and showed that transport, which before seemed easy, became very difficult when travelling with children and took a lot longer.

Lenclos showed how the urban environment has changed to fit cars, for example how a lot of local shops were closed down, so that it is not possible to walk to the supermarket anymore. Bad design and planning, long waits, steps, lack of information and bad routing are some of the problems for women travelling with children. Many parents are unable to participate fully in the life of their city, but for a lot of them public transport is the only means of accessing shops, childcare, hospitals, jobs, education and other key amenities.

Lenclos concluded that there is a need to think of children, elderly, handicapped, etc.,

when designing transport. Trains, trams and buses are designed for young and fit people and not for people with disabilities or, in this instance, for women with children. Since the transport system is not designed for everybody, people with disabilities have to rely on help from strangers. There is an essential relationship between public transport and social inclusion. Therefore, a public transport system that works for everyone is necessary for the living city, and the goal is more inclusive cities, which means: cities that work for all.

User-friendly innovation: Your Concept Car by

Eva-Lisa Andersson, YCC Project Manager, Volvo, Sweden

Eva-Lisa Andersson from Volvo presented Volvo's new concept car called Your Concept Car, which is a car designed for and by women – everybody on the project team, from technical experts to designers etc., were women. She presented that part of the motivation for the project was that women are a growing part of the people buying cars, and Volvo thus discerned a potential market.

Andersson explained how the starting point of the project was to look at the user's needs: the female driver. Research showed that women want the same as men, but also that they want even more. Some of the female demands were a car which was easy to park, had a good visibility, reduced engine noise, interior convenience, and a strong brand reputation, was safe and secure, big on comfort and quick and easy to get in and out of. Other demands were more interior space for handbags and special materials used for example for seats and on the car's outside, etc., so that it was easy to clean. The conclusion was that if you meet the needs of women, you will reach the men, too.

NEW Book presentation: Gendered mobilities by

**Tanu Priya Uteng, Research Fellow, Department of Civil and Transport Engineering,
Norwegian University of Science and Technology, Norway**

In presenting her new book, Tanu Priya Uteng talked about ways to understand transport. She explained how transport can be understood as a movement, and how the concept of 'mobility' is very complex, since it is affected by a lot of factors. The aim of the book *Gendered Mobilities* is to explore different aspects of mobility and gender. The diversity in perspectives on mobility and gender stands out in the book through several contributions from different researchers showing how diverse gender mobility should be understood.

Panel discussion: A New Gendered Transport Architecture for Europe? by

Petter Næss, Department of Development and Planning, Aalborg University, Denmark, Maria Christina Marolda, Directorate-General of Research (Transport), and Thomas Alslev Christensen, Danish Ministry of Science, Technology and Innovation

In his presentation, Petter Næss talked about gendered design of transport. He listed different models for gender mainstreaming in transport planning, which would have different outcomes not only for the transport system, but also for the environment. He highlighted a model where men adopt women's behaviour, which is characterised by being more sustainable, since this model would have a positive affect on the transport system, environment and health. Another possible model could be that women adopted men's attitude, which would have a negative outcome and mean that the situation of pollution and traffic accidents, etc., would be worse than it is now. A third model is the 'business as usual'. Næss explained how the business as usual model will have some positive effect, but will not be as effective as if planning were based on a model having women as the norm.

Næss concluded that urban planning is very important for people's opportunities. He illustrated this point by mentioning a study and interviews with women from central Copenhagen who managed children and full-time jobs without having a car, while women from the outskirts of the city have to plan everything much more carefully and are maybe only able to work part-time.

Maria Christina Marolda talked more about the masculine image in transport, and pointed on how the type of persons used as model when designing cars are a Healthy Adult Man (also called HAM). Marolda recounted an experience she had in Germany where multi-storey car parks had different floors. The underlying idea of this design was to give an enhanced feeling of safety through making some floors more spacious, allowing more space for parking the car and illuminate the floor at all hours. She explained how this can be seen as a gendered design since the lack of safety is often claimed by women to be a big problem.

Thomas Alslev Christensen ended the panel discussion with a summary of the day. He pointed out that what we learned from the workshop and from Transgen is that gender aspects must be incorporated in all new developments and innovations and that there must be a bigger focus on different user needs. Finally, he concluded that there is a need for more research in the field of transport and gender.

7. BIBLIOGRAPHY

As part of the Transgen project we carried out a literature search on gender and transport in relevant databases, and we are including a full list of references here. The list also contains the theoretical references that we use in the report. The bibliography can also be found on our website. We have subdivided the bibliography into relevant themes relating to the sections of the report. The themes are:

- Gender and gender equality
- Gender mainstreaming the transport sector
- Travel patterns
- Gendered meanings, identities and everyday lives
- Gender and transport technologies
- Imaginations: popular culture, art and aesthetics
- Fear and safety in public space
- Transport and Information & Communication Technologies (ICT's)
- Traffic behaviour and valuation of infrastructure
- Sustainability
- Driving, risk and safety
- Employment
- Statistical resources
- Gender mainstreaming plans and transport plans
- Internet links