



Mobility and Social Cohesion

Background Paper in Preparation of the Metropolis
Commission 4 Conference in Toronto, June 2006



Diana Runge, Hans – Joachim Becker

Berlin, Dezember 2007

ISSN 1613-1258

**Schriften des Fachgebietes Integrierte Verkehrsplanung
des Institutes für Land- und Seeverkehr
an der Technischen Universität Berlin**

ISSN 1613-1258

Eigener Verlag und Druck

Vertrieb:

Technische Universität Berlin
Fachgebiet Integrierte Verkehrsplanung
Sekretariat SG 4
Salzufer 17/19
10587 Berlin

Telefon +49 (0)30 314 25145
Fax +49 (0)30 314 27875
E-Mail sekretariat@ivp.tu-berlin.de
<http://www.verkehrsplanung.tu-berlin.de>

Technische Universität Berlin
Institut für Land- und Seeverkehr
Fachgebiet Integrierte Verkehrsplanung

IVP-Schriften, Nummer 17
ISSN 1613-1258

Diana Runge, Hans – Joachim Becker

Mobility and Social Cohesion

Background Paper in Preparation of the Metropolis Conference in
Toronto, June 2006

Berlin, Dezember 2007

Vorwort

Die vorliegende Veröffentlichung ist ein Ergebnis der Zusammenarbeit zwischen dem Städtenetzwerk Metropolis und dem Fachgebiet Integrierte Verkehrsplanung im Jahr 2006. In Vorbereitung der jährlichen Konferenz der Kommission 4 ‚*Urban Mobility Management*‘ des Metropolis Netzwerkes wurde durch das Fachgebiet Integrierte Verkehrsplanung ein Hintergrundpapier zum Schwerpunktthema ‚Mobilität und sozialer Zusammenhalt‘ erstellt. Dieses diente als Input und Diskussionsgrundlage für die internationale Konferenz ‚*Mobility and Social Cohesion*‘, welche vom 14.-16. Juni 2006 in Toronto stattfand. Die Konferenz wurde vom Metropolis Städte- sowie dem Internationalen Frauennetzwerk zusammen mit der Senatsverwaltung für Stadtentwicklung Berlin, der Stadt Toronto und dem Fachgebiet Integrierte Verkehrsplanung organisiert und durchgeführt.

Für die zusammenhängende Aufarbeitung und Darstellung der beiden komplexen Themenbereiche Mobilität und sozialer Zusammenhalt wurde eine Reihe von Quellen aus internationalen Forschungszusammenhängen, Ansätze aus der politischen und planerischen Debatte sowie konkreten Fallstudien herangezogen. Des weiteren wurde im März/April 2006 eine Befragung unter den Mitgliedsstädten der Kommission durchgeführt, deren Ergebnisse die aus der Theorie gewonnenen Erkenntnisse um konkrete Fragestellungen und Lösungsansätze aus der Praxis ergänzen.

Im Anschluss an die Einführung in das Thema wird im ersten Abschnitt auf den Beitrag, den Mobilität und Verkehr zum Aufbau und Erhalt städtischer Gesellschaften leisten können, eingegangen. Im zweiten Teil geht es verstärkt um das Zusammenspiel von Mobilität/Verkehr auf der einen und soziale Ausgrenzung/Inklusion sowie Armut auf der anderen Seite. Ein dritter Schwerpunktbereich der Arbeit liegt in der Betrachtung von Gender und Verkehr, d.h. in den unterschiedlichen Ansprüchen, Erwartungen und Notwendigkeiten an den bzw. im Verkehr, die sich aufgrund der sozialen Rollenverteilung zwischen den Geschlechtern ergeben. Auf die thesenhafte Zusammenfassung der Inhalte im letzten Kapitel folgt im Anhang abschließend die Aufstellung der Befragungsergebnisse. Diese werden detailliert für die einzelnen Städte wiedergegeben, da die unterschiedlichen kulturellen, institutionellen und administrativen Strukturen einen direkten Vergleich nicht erlauben.

Das hier vorliegende Hintergrundpapier trug wesentlich zur Diskussion auf der Konferenz in Toronto bei. Eine umfassende Dokumentation der Ergebnisse liegt in Form einer CD-ROM vor und kann unter den angegebenen Kontakten (siehe Impressum) angefordert werden.

Contents

Introduction	7
General Overview	8
Social Cohesion in Metropolises – Quotes from the Paris-Meeting	9
Trends and Changes in the Urban Social Fabric	9
What is Social Cohesion?	11
Linking Mobility and Social Cohesion	12
Mobility Chances: Impacts on Poverty and Social Exclusion	14
Poverty and Transportation	15
Transportation and Social Exclusion	17
Poverty and Gender	23
Gender and Urban Mobility	24
Outlook	36
Imprint	38
Annex 1: Results of the Survey on Mobility and Social Cohesion	I
Annex 2: Endnotes	IX

Introduction

„The subject of this conference was predetermined by the fact that mobility in the world's largest cities is fundamental for the future of these cities and the countries involved. The rapid demographic and economic growth is generating a rapid expansion of mobility requirements, which results in intensified congestion, pollution and impairment of the smooth functioning of urban centres. Until it is mastered, this trend will spawn social problems such as mounting inequalities and tears in the urban fabric.“¹

These were the welcoming words of Michel Rousselot, Conference Chairman of the International Conference “Mobility and Social Cohesion” that took place in Paris in May 2004. The conference had been organised by UATI and ICET, two NGOs connected to UNESCO, in co-operation with the Metropolis network. During the conference, participants from all over the world came together to share experiences on the embedment of engineering and organisational transport solutions in marked social progress. However, the conference also revealed that – apart from promising approaches and valuable lessons learnt – when it comes to social aspects of urban mobility there are still more questions than answers.

Likewise, the report “Safeguarding Mobility - Transforming Transportation” that was prepared for the meeting of C4 during the 8th Congress of Metropolis in Berlin in May 2005 also named mobility and social cohesion as one of the main topics for further discussions.² This notion was underlined by the estimation of the severity of social problems in urban transport that had been voiced by the Metropolis members in two surveys carried out by Commission 4 in preparation of the report. The following graph outlines the results of this survey, highlighting especially those areas of concern related to social aspects.

Previous discussions led to acknowledging the importance of the subject

	Barcelona	Belo Horizonte	Berlin	Brussels	Lisbon	London	Mashhad	Mexico City	Moscow	Paris
Motorisation	4	4	2	3	4	2	5	5	5	4
Congestion	3	3	3	3	n.s.	3	3	5	5	3
Noise/ Air Pollution	3	3	5	4	5	3	4	5	5	4
Accidents	4	3	2	4	3	2	2	5	5	4
Disparity Public Transport	3	2	3	3	3	2	2	5	3	3
Reduced Mobility NM people	2	5	5	2	5	1	5	5	3	4
Freight Transport by Road	4	1	5	4	5	3	5	5	4	4
Participation	2	2	3	5	3	2	5	5	3	4
Co-ordination	4	5	2	5	2	4	4	4	2	3

Figure
Estimates of severity of urban transport problems
(5 = great problem; 0 = not a problem)

Source: Commission 4, Second Survey 2004 (unpublished)

During the conference, the representatives of the cities adopted a declaration on sustainable urban mobility, which highlighted again the social dimension of mobility and its importance.³ The relevant paragraph of the declaration stated the following:

“We acknowledge the importance of mobility for granting access and the possibility to participate in urban life for all citizens. We therefore attempt to establish transportation systems that include the needs of all groups of the population, especially the less affluent, the young, the elderly, and the disabled. Particular attention also needs to be paid to gender issues, since we respect the

C4 Declaration on Sustainable Urban Mobility highlights the importance of mobility for fighting poverty, social exclusion and gender inequality

Adopters of the declaration committed themselves to stronger integrate social aspects into their city's transport planning

different needs and demands arising from different gender contexts, and we are determined to give adequate consideration to this issue.

We will thus aim at developing and implementing appropriate measures and control mechanisms to grant equal access for all, e.g. by fare and pricing policies, flexible routing and servicing, the establishment of schedules and time-regimes that are considerate of people's activity patterns and time budgets, the introduction of innovative transport services that also make use of the opportunities provided by information and communication technologies, and by addressing the safety and other needs of transport users. We are most concerned about the increase of road accidents and the number of people injured and killed by traffic. It is our aim to increase traffic safety by making use of the available technical, organisational and other measures."

Some of the key issues of the declaration's statement on mobility and social cohesion, namely the potential to use improved mobility as a means to combat poverty as well as exclusion and to support the achievement of gender equality, now form the core of this paper.

Based on the declaration and on further discussions in Berlin, the Commission decided to put mobility and social exclusion on the top of the agenda 2005-2008. The upcoming conference in Toronto, for which this paper has been prepared, is a first step towards achieving a more comprehensive understanding of mobility related social issues in cities worldwide.

Considering the past debates on the subject, the question could be raised why Commission 4 decided to make mobility and social cohesion again the topic of a conference in Toronto in June 2006. The reasons for that are manifold.

Broad range of changes affecting the social fabric of cities worldwide challenge urban transport and highlight the importance of stronger considering its social dimension.

In the light of the ongoing processes that affect the social fabric not only of a country but also of a city, considerations on social developments gain rather than lose importance. Demographic changes, the imbalanced distribution of wealth and income, diversification of lifestyles, changing social roles of men and women, and other factors all lead to a more diverse urban society. While in general this must not be seen as a threat, the realisation of these developments on the streets of the city might in turn generate negative developments. The call for inclusive societies and the fear of growing exclusion and the division of the society into "have's and have not's" are ever-present, both in developed and developing countries for all domains of urban life, including mobility and transportation.

This paper aims at stimulation a fruitful discussion process by providing background information on theoretical and practical approaches

Thus, the intention of the paper at hand is to stimulate questions rather than to provide answers, and to prompt motivation for each of the conference participants as well as for other readers to explore the subject of mobility and social cohesion further in the context of his/her individual cities. Building on the aforementioned two conferences, on input derived from an explorative survey carried out in April/May 2006 among Metropolis member cities, and on other sources, this paper will hopefully serve as a valuable input for a fruitful discussion in Toronto.

General Overview

Structure of the paper: From the theory to practice and from general to specific issues

By and large, this paper covers three dimensions related to mobility and social cohesion: First, the contribution of mobility to a cohesive urban society is introduced by some general remarks on perspectives and views on social cohesion and its importance for harmonious life in the city. Second, the connection between mobility and transportation on one side and poverty and social exclusion/inclusion on the other side is explored. The third, and to some extent the main part of this paper, focuses on gender issues in transportation, thus acknowledging the fact that social, economic and cultural conditions, which determine different mobility patterns and transport demands of men and women,

need to be taken into account in order to allow for equality in mobility opportunities.

Naturally, these are only some of the concerns that can be raised with regard to social developments and urban mobility. During the C4 Meeting in Paris, a number of different issues were debated as well ranging from unsustainable urban development to safety and equality issues to economic and poverty trends – all of which are linked to mobility.

Social Cohesion in Metropolises – Quotes from the Paris-Meeting⁴

"Today's cities have become pockets of exclusion and isolation. To make urbanization perform its social functions and to enable cities to return to their roots, decision-makers are obliged to take new approaches. Fritz Lang once said: 'If you want to stage a true-to-life show, don't buy a car. Take the subway, ride a bus, or go on foot and take a close look at the people around you.' We are the directors of the stage show we bill as "social cohesion" and we are called upon to restore the opportunity for people to look each other straight in the eye. "

Serge MERY, Vice President
for Transportation, Île de
France Regional Council

"The connection between mobility and social cohesion is not obvious to everyone, however. Mounting impoverishment in European cities poses the question of making mass transit both efficient and affordable for all. "

Cornelia POCZKA, Technical
Assistant, Metropolis
Commission4, Berlin Senate

"Social cohesion has been conceived in terms of poverty and segregation, but it is a societal issue also touching other population categories. Cohesion requires a feeling of being part of the same town, of being a leading actor and not some director's optional extra. (...) The highest virtue of a mobility system is the ability to ensure intercultural contact in the heart of the city it serves. "

Josée LANDRIEU, Director,
Forecasting Unit, French
Ministry of Public Works

"The question of social cohesion in major urban centres threatens to take on new guises in the coming years. (...) Consultation is one of the foundations of cohesion with the population. (...) The American model of a sprawling city creates a different form of social cohesion. After all, bumper-to-bumper traffic in European city centres also presents obstacles to social integration. Investigations should focus on old and new social cohesion objectives. (...) The key issue of social cohesion therefore has a different dimension. What will become of the cities where mileage and travel time budgets continue to grow relentlessly?"

Yves CROZET, Director,
Transport Economics
Laboratory, Université Lyon II

"Several tentative conclusions are apparent. Mobility, desired by all, is conducive to social cohesion and to peace. Being the former head of the Marseilles Transit Authority, I can testify to the situation in that city, where people of all nationalities and all social classes rub shoulders. However, this situation is not a source of violence, because people mix. Violence is in fact an outgrowth of isolation, so favouring travel and intermingling is essential. "

Alain GILLE, President, French
National Transport Council

Trends and Changes in the Urban Social Fabric

Population changes, demographic trends, economic developments, (un-)planned urban growth and shrinking processes, technical and societal innovations, the questioning of traditional role models and the adaptation of cultural traditions to modern circumstances all form and re-form cities worldwide. Transportation systems in turn are designed, modified or newly created to serve the thereby created or transformed mobility demands. However, especially in urban areas, which have always been 'laboratories' of social developments, where new trends first emerge and where global movements get translated into local practices, changes often occur rapidly and sometimes even unexpectedly. Since urban and transport planning are often not able to react as dynamically, situations emerge where supply and demand no longer match. This sometimes leads to difficulties especially for those reliant on public transportation. For those in

Currently major trends are at work, which will shape and re-shape our cities. This is both a risk and a chance. It might be a risk if trends are not foreseen, acknowledged and reacted to. It might be a chance if transformation processes are used to improve the urban quality of life.

Local conditions have a strong effect. However, some general trends and their impacts can be described to be at work in many cities in a similar manner.

'Western' societies are greying strongly and rapidly, yet demographic changes affect all cities.

Globalisation produces winners and losers among and within individual cities.

The number of major cities is continuously increasing, yet shape and structure differ enormously around the globe.

Mobility and transportation link these trends on global, national and city levels. They thus produce proximity, albeit over ever increasing distances and partly with ever worrisome results.

possession of a car problems often seem less pronounced: motorised individual transport always seems to find a way to fit in with the demands, that sometimes are even created by the car itself.

Of course, framework conditions and social developments differ among countries and cities. Thus, similar causes can create different symptoms, so to say, depending on local traditions and heritage, cultural and economic backgrounds, as well as political systems. When comparing cities like those involved in the Metropolis network, some generalisation and simplification of present trends is necessary in order to allow for an open discussion of these issues. While this is done with the utmost respect for the diversity of situations and the uniqueness of each city, the following overall trends can be identified as relevant for most of the major urban centres of the world:

Demographic trends change the structure and faces of our cities. Most developed countries are currently experiencing the first phase of a process that can be characterised by three keywords: decline (in total population numbers), greying (i.e. increasing share of older age cohorts) and increasing diversity (caused by migration flows). The first two of these trends are already noticeable, and even if rural areas seem to be most affected, the consequences for cities can already be felt. In developing countries, most major urban agglomerations still experience population growth, which leads to higher shares of young inhabitants. Nevertheless, economic development is expected also to lead to a decline in fertility rates, which is likely to cause a decrease in natural population growth in the medium future.

Economic trends, most notably the globalisation of economic processes and the changing distribution of labour, are among the strongest forces that shape urban areas. Cities as well as nations become competitors over attracting investments, labour and – consequently it is hoped – wealth. Cities that are among the winners of this competition do indeed experience an increase in production, employment and income; however, the distribution of these blessings seldom benefits all inhabitants. In fact, the gap between winners and losers of this process widens. In cities that lose some of their economic power this process is often even more pronounced. Coupled with the aforementioned demographic trends, the risk for individuals or even whole groups of the population to become impoverished or otherwise excluded from society is most pronounced for those who can not adjust their lives to the demands of the economy: the elderly, the children, households without economic reserves or social networks to fall back on, etc.

Urban development, influenced by demography and economy, might either foster or limit inequalities. Both, unplanned growth and the shrinking of cities, coupled with limited possibilities for urban administrative bodies to act, instead of just react, create enormous hurdles for sustainable development. The consequences are growing distances both spatially between areas and socially between population groups, difficulties to integrate the different needs into a coherent policy line, and increasing environmental problems caused by inappropriate uptake of urban and open space, increase of energy consumption and, last but not least, growing streams of (individual) traffic. However, it would be wrong to draw simply a picture of ongoing deterioration and decay. A number of cities develop innovative ways to cope with the new challenges, and major urban centres continue and, in some cases start, to become attractive places to live in.

Urban mobility links these developments globally, nationally and on a city level. People require more and more mobility to adapt to the challenges posed by present development, and technical as well as organisational innovations are well under way to support and enhance the positive contribution of mobility to the quality of people's lives. Nevertheless, a great number of problems still remain, including environmental, economic and social challenges to current transport planning and operation.

By sketching out these overall framework conditions, however brief and admittedly lacking in detail and accuracy, each reader of this paper is kindly invited to assess the scope, extent and direction of these developments in his/her city and make them the subject of discussion during the Toronto meeting and beyond.

For some issues that lie in the heart of the debate on cohesion and mobility in our cities, more input is provided below. It is thereby attempted to bring together information on some more or less already well documented issues related to the social dimension of urban mobility under a new perspective. In fact, this paper is aimed at stating some facts and figures that illustrate the problem and possible ways to act; yet at this stage no solutions are suggested. Instead, the intention is to build up a mutual base of knowledge and understanding of these issues, namely poverty, exclusion and gender and their relation to mobility.

This paper can only sketch out some of the main developments and movements that are currently at work in cities worldwide. More detailed accounts are invited to be brought forward during the Toronto meeting!

What is Social Cohesion?

"Linking mobility and social cohesion implies that the ability of the population of a city to live together in harmony is greatly influenced by the access to urban and social functions, and thus by transportation."

"Mobility" and "Social Cohesion" are two simple sounding terms that each in itself contains a multitude of aspects to consider

This sentence introduced the topic within the framework of the C4 report "Safeguarding Mobility – Transforming Transportation" written in 2005. Easy as it sounds, this overall description of what is meant by making a connection between issues of urban transportation and of the well-being of individuals and the society holds in its core a number of partly controversial issues.

Mobility itself means *"the ability of an individual to move in between defined units of a system"*.⁵ In the physical context, i.e. where movements in space are considered, (physical) mobility is often used synonymously with the term transportation. While in many circumstances it might be sufficient to do so, it nevertheless must not be forgotten that the ultimate aim of transportation is to enable people to be mobile. Or as the saying goes: *Mobility is what we want, traffic is what we get*. When considering social aspects of transportation, however, a wider perspective of mobility has to be applied. This also includes underlying factors of mobility, for example the various activity requirements of people that cause the need (and want) to be mobile, the consequences that might arise if mobility is restricted, and the question of what other alternatives to physical travel there might be.

Applying a mobility rather than a transport focussed perspective means: putting people first.

Thus, applying a people-centred focus instead of concentrating solely on technologically achieved movements is what distinguishes the (wider) point of view of mobility from that of transportation.

The term **social cohesion** is even more difficult to grasp, especially because it is applied differently in varying contexts. Thus, a single, universally applicable definition does not exist. This does by no means imply that social cohesion is merely a theoretical concept; in fact, quite the contrary holds true. Definitional difficulties appear to be embedded in the root of the matter: since the notions on how the members of a society and/or a community should interact change over the course of time, there simply can not be a single definition that covers all of the related aspects once and for all. Social cohesion should therefore be understood as a process rather than a fixed state.

A variety of definitions of "social cohesion" exist, yet this does not mean that it is merely a theoretical concept. Instead, changing notions of cohesion just show its embedment in overall views on, of and in a society, which is currently changing. Cohesion therefore is a process rather than a fixed state.

The Canadian researcher Judith Maxwell points out that social cohesion is *"a new expression coined to address an old issue – how to maintain social order"*.⁶ It would be easy to enter into an academic debate now on how the meaning and use of the term has changed over time. However, this is not in the interest of this paper. Instead, out of the wealth of definitions of social cohesion the following one, which seems both comprehensive and general enough to build on in the following chapters, is adopted for this paper:

The Senate of Canada describes social cohesion as *“the capacity to live together in harmony with a sense of mutual commitment among citizens of different social or economic circumstances”*⁷.

Embedded in this definition are the features that appear to be commonly understood as the ones that a cohesive society should maintain. Among these are the absence of poverty, exclusion and fear, and a sense of trusting in and belonging to a community that is characterised by the ability to integrate diversity.

Lastly, it must also be considered that in some countries, the term social cohesion (or social exclusion as its negation respectively) is not used at all with regard to transportation. For example, in Canada the term basic mobility is instead often referred to.

In the United States social exclusion as a term is also neither widely understood nor used. Thus, environmental justice, a concept that is rooted in the environmental policy field and also touches many societal and social aspects, is increasingly applied in transport policy. The close connection to the term social cohesion can be illustrated by referring to “Environmental Justice & Transportation – A Citizen’s Handbook” where the meaning of environmental justice for the domain of transportation is described as follows:

“To parents living in a neighbourhood with a lot of bus service, environmental justice might mean converting buses from diesel to natural gas, reducing their children’s exposure to air pollution. A security guard working the night shift might feel that environmental justice has been served if the bus she takes deviates from its regular route to drop her off closer to home. Environmental justice to a non-English speaking neighborhood might mean having bilingual staff and community leaders running a public meeting. To low-income workers relying on bus service in a large downtown, environmental justice might mean that a city increases the frequency of buses instead of building a new light rail line that would serve upper-income commuters. In short, there is no single definition of environmental justice: its meaning depends on context, perspective and timeframe”.⁸

In some countries terms other than social cohesion are used in transportation to address the same context

United States: Concept of environmental justice includes to a large extent issues otherwise addressed as of importance with regard to social cohesion

Linking Mobility and Social Cohesion

While the above already addresses possible links between mobility and social cohesion, these relations and interdependencies have not yet been fully explored. Instead, it often seems that economic and ecological issues are favoured over social considerations, building on the assumption that if a transport system functions in an economic manner and with as little environmental impact as possible, social objectives are automatically within reach. However, experience shows that this is not always the case, and sometimes economic, environmental and social concerns might even contradict each other.⁹

Building on the previous, three obvious links can be drawn between the outlined features of social cohesion and characteristics of urban mobility.

First, the satisfaction of mobility needs of all groups of society is statutory to support equal chances in life.

Access to transportation is a prerequisite for entering the job market (particularly due to the increasing separation of residential and employment areas) and/or participating in education and training. The participation in these activities determines the chances of groups or individuals to maintain and gain a higher quality of life and therefore form a component of social equity. Thus, social equity is also a matter of equal accessibility of areas that offer job opportunities, or in transportation language, it is a matter of the possibility and ability to commute.

Second, in a world where family members, friends and other social associations are more often than not spatially separated from each other, social bonds and relationships require mobility and thus transportation. While recently the possibilities of information and communication technologies have increased the

Social cohesion is not automatically achieved by addressing economic and environmental concerns

Social equity
... requires transportation to work, education, training, etc.

Social connectedness
... visiting people and carrying out leisure activities are some of the main reasons for people to be mobile

share of 'virtual mobility', i.e. the movement through electronic rather than physical networks, humans need personal, 'real' contact to sustain proper relationships. Moreover, the increasing shares of non-work-related trips, which are carried out in order to participate in social activities such as sports, cultural events and entertainment highlight the importance of transportation for the private life of people. Additionally, mobility increasingly becomes a leisure activity in itself for a wide range of people with an equally wide range of different 'mobility tastes' including both non-motorised (walking, cycling) and motorised (motor biking, cruising, driving around) means of transport.

The diverse and colourful mix of people – different age groups, backgrounds, nationalities, orientations, etc. – that comes together in public transport can probably not be found to the same extent anywhere else. While this should be seen foremost as a chance to see and experience diversity, it can also sometimes create tension. Socially acceptable behaviour is therefore a prerequisite for peaceful travel in public transport, which can probably and, for the reasons outlined above, be seen as a 'training ground' for tolerance and openness to other people. Behavioural codes, namely those established in terms of conveyance of transport providers, set minimum standards for acceptable manners, which differ from country to country and even from city to city, depending on cultural backgrounds, traditions and other circumstances of life. While this does not prevent unfortunate episodes to take place in transport just like in any other public space, the way people interact can also create positive experiences of people being friendly, helpful and positive to each other. Thus, it is argued that the atmosphere that characterises public transport embodies the atmosphere of the entire city. A somewhat different notion is often applied to the interactions that take place between car drivers and non-motorised people, who often accuse each other of unsocial behaviour. This is of some relevance also with regard to safety issues, since intolerance and anti-social behaviour between e.g. motorists and pedestrians can also lead to accidents and thus even to physical harm.

When mobility is linked with social cohesion, the main issues that are addressed relate to the role of mobility as a prerequisite for participating in the 'normal' activities that characterise life in a city. First and foremost, it needs to be considered to what extent the transport system of a city is able to satisfy the mobility demands and needs of all citizens. On a second level, the way in which mobility is handled, especially the kind of transport means and the way people behave in them, can be addressed.

After having thus briefly covered the theoretical approaches that constitute to some extent the rationale behind considering social issues in transportation, some more concrete issues shall be addressed.

Social order

... transport space as public space attracts a diverse mix of people, who need to get along and retain (at least a minimum) of socially acceptable behaviour towards each other

In brief, the link between mobility and social cohesion has two main dimensions. First, equality of mobility chances is a prerequisite for equality in life. Second, the diversity of and within transport means can be seen as a 'training course' for tolerance and social behaviour.

Mobility Chances: Impacts on Poverty and Social Exclusion

Lack of mobility may lead to a lack of social integration

It has been said before that mobility is a prerequisite for participation in those activities that determine the quality of life of individuals and groups and, moreover, that characterise the belonging of people to the (urban) community. Vice versa, lack of mobility may in turn lead to a lack of social integration and participation.

The reasons why people want and need to be mobile are based on their economic and social conditions, their stages in the lifecycle, their education and professional background, their family and household situation as well as their aspirations and needs, to name only a few. In the same way, the consequences that arise out of restricted mobility are manifold and affect different people in different cities in different ways.

In developing countries, the link between poverty and transportation is of major concern. While lack of transport might lead to restriction of employment opportunities and, thus, to lower incomes and the reinforcement of poverty, transport is also frequently discussed as a means to combat poverty.

*"The World Bank currently uses a figure of \$US 1 per day (in 1985 purchasing power dollars) for **absolute poverty**. The alternative has been to define poverty as relative deprivation, for example as half mean income, or as exclusion from participation in society. Thus the European Union has decided that 'the poor shall be taken to mean persons, families and groups of persons whose resources (material, cultural, social) are so limited as to exclude them from the minimum acceptable way of life in the member state in which they live'".¹⁰*

For the scope of this paper, poverty is seen not as a fixed state but as a dynamic, multi-dimensional process circling around the production and re-production of inequalities. This general notion arises out of the fact that *"... there is a bewildering ambiguity with which the term 'poverty' is used."*¹¹ Quite often one indicator, most frequently income, is used to identify the poor. However, it would not serve the purpose of this paper to thus restrict the view on poverty, since the link to transport reaches far beyond the financial aspect of deprivation. It should however be noted that when we speak of poverty in the context of developing countries, we describe a potentially life-threatening condition that applies to often large proportions of the population. In contrast, when poverty is mentioned in the context of developed countries, the focus is on hardships and conditions, which, while reducing an individual's conditions below the standard, seldom takes on an equally severe magnitude.

For cities in developed countries, restricted mobility might also cause difficulties in, for example, finding and keeping employment; however, due to the overall better conditions of the economy and the existence of a social net to fall back on, the impacts are usually less devastating. Nevertheless, restricted mobility in developed cities might also lead to hardships for those affected - an issue that has recently been discussed along the lines of linking transport and social exclusion.

***Social exclusion** focuses attention on weakened possibilities to participate in social life in a multidimensional and dynamic perspective.¹²*

Generally, what distinguishes social exclusion from related terms like disadvantage, poverty, underclass, etc. is the adoption of a more dynamic and holistic approach to life satisfaction. Apart from a dynamic and process oriented perspective, the multidimensionality is one of the main distinguishing characteristics of social exclusion. Also, and most important to consider in terms of transport and social exclusion, it is not only people that can be excluded, but the concept may also apply to certain (urban) areas. This was also highlighted by the British Social Exclusion Unit stating that social exclusion is *"a shorthand term for what can happen when people or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, poor housing, high crime, bad health and family breakdown"*.¹³

It can be argued that the mechanisms of transport poverty and income poverty on one hand and transport poverty and social exclusion on the other hand are broadly similar. Therefore they are presented jointly in this chapter, however, the more detailed issues will be discussed separately in order to unfold the different causes, impacts and consequences in a comprehensible way.

Poverty and Transportation

In cities of the developing world, large proportions of the population live on the edge of society, not always solely but often mainly, due to their inferior economic position resulting in a life in poverty that only very few can ever escape. Cause and symptoms are multifaceted and often difficult to distinguish. Unemployment or working in low-income jobs, lack of access to basic amenities such as clean water, health services, education, coupled with bad housing conditions, malnutrition, exposure to pollution and violence, exclusion from decision making processes, etc. are all determinants of urban poverty.

In many cities of the developing world, and also in some transformation societies, poverty is a life-threatening state, to which a large number of people are reduced.

Different mobility needs of the poor are not adequately considered in urban transport planning and provision.

While, of course, not all people with low income show the same patterns of mobility or similar transport demand, there are nevertheless certain characteristics that distinguish them as a group from people belonging to better off population groups and thus from the rest of transport users:¹⁴

- Poor people make fewer trips per capita than do the non-poor, usually within the range of 20 to 30 percent.
- Average trip rates of the poor just as those of the non-poor have tended to increase over time as income increases.
- Non-poor typically make two or three times as many motorised trips per capita as do poor people, and in most poor countries, private motorised vehicle trips are restricted to the wealthiest 20 percent of the population, with the motorcycle extending this down to those with average incomes in middle-income countries.
- Non-motorised modes of transport, i.e. walking and cycling, play a most important role in the transport patterns of the poor.
- Poor people's journey purposes are more restricted, with journeys to work, education and shopping dominating.
- Even though it is believed that household consumption surveys tend to understate transport expenditures, while transport surveys tend to overstate them, it has been estimated that transport accounts for between 8 and 16 percent of household expenditures in a range of developing countries in Africa. Estimates for major cities in some other countries also fall in this range, with 15 percent for an industrialised country such as France.
- In virtually all countries, richer groups spend a higher proportion of their incomes on transport than do most of those with lower incomes. Some of the very poor may be forced to accept precarious living conditions in order to be able to access work. For example, a survey of pavement dwellers in Madras, India, showed that 59 percent walked to work at no cost.
- The transport patterns of poor people exhibit a complex trade-off among residential location, travel distance and travel mode in an attempt to minimise the social exclusion associated with low earning potential. Some of the poor minimise travel by living close to employment markets yet in virtually uninhabitable environments. Others live further away from the Central Business Districts in order to pay less for housing, yet their transport burdens are inevitably high.

"The 'income poor' make fewer trips, and more of their trips are undertaken on foot. For most purposes they are restricted to whatever services (usually poor services) that can be accessed within walking distance, making them 'accessibility poor'. The journey to work may be relatively long. Even if it is not, it will use slow modes and may be very time-consuming, so they are also 'time poor'. For poor people, and particularly for women, children, and the elderly, trip making is often deterred because of their vulnerability as pedestrians, both to traffic accidents and to personal violence, making them 'safety poor'. Finally, there is evidence that long walking distances and times also creates tiredness and boredom that reduces their productivity by adding an 'energy-poverty' dimension to their deprivation."¹⁵

The differences in transport patterns of the poor as opposed to those of the non-poor are often not adequately considered in transport planning of the cities. Therefore, the possible contribution of transport to improving poor people's lives is often not even acknowledged, let alone acted upon. In fact, it has been criticised that *"The structure of provision of formal public transport services tends to reflect and accentuate the distribution of poverty rather than to compensate for it".¹⁶*

Adequate transport can support the poor, yet this option is rarely used, and more often than not transport structures increase rather than reduce the everyday burdens of the poor.

Poverty reduction through transportation needs to be targeted at the poor.

Improving transport conditions alone will not reduce poverty, yet it does play a crucial role.

Even though it has often been said that transport growth and economic growth, whilst being linked, are not to be seen synonymously, for many cities especially in developing and transformation countries transport investments might contribute to economic growth considerably, which is hoped to benefit the poor.

The transport sector provides job opportunities also for the low qualified, which most of the poor are.

Paradoxically, transport measures might deteriorate conditions for the poor rather than improve them since they are most negatively affected by impacts such as barrier effects, spatial isolation, accidents, increasing costs, air pollution, etc.

Subsidies do not always reach those that they are initially targeted at and often serve the middle income much better than the poor.

Considering that transport is an intermediate service, and therefore a means to an end, transport alone cannot reduce poverty. However, it serves a pervasive and crucial complementary role.

It is often argued that the best way to help the poor is to improve the overall economy so that in turn some of the wealth created might trickle down to the low-income population. While this must not be held as a universally applicable truth, the improvement of economic conditions of countries and cities is one of the main framework conditions for poverty reduction, and it is inevitably linked to transport as the following states:

*"Studies by the World Bank show that transport generates growth by facilitating trade, both nationally and internationally, and by increasing access to health and education facilities as well as to local and national amenities. At the macroeconomic level, cross-country studies have confirmed that investment in transport raises growth by increasing the social return to private investment without 'crowding out' other productive investment and that inadequate transport infrastructure is an important constraint on aggregate agricultural productivity."*¹⁷

Additionally, infrastructure construction and maintenance works, especially if carried out in a labour intensive way, vehicle manufacturing, operational and service activities might open up new sources of income. These direct approaches to poverty reduction through transportation are only rarely considered. In fact, favouring large-scale investments over small-scale projects might reduce the labour intensity and thus, the income effect to the poor.¹⁸

Additionally, one must not be misled about the positive impacts of transport growth:

*"Narrowly focused output growth oriented strategies tend to increase auto dependency which, in turn, tends to displace non-motorised transport and reduce the variety of public transport means available to the poor. The poor are also disproportionately displaced by the expansion of right-of-way for transport infrastructure or are less able to afford increased prices as the transport sector becomes more commercial."*¹⁹

Further criticism on infrastructure projects, which are often carried out (and in many cases also co-financed by international development aid institutions) with the expectation to improve conditions for the poor, relates to the costs of those projects. It is argued that in economies where basic needs such as water, sanitation and education are not met, the major public funds that result from infrastructure investments also contain opportunity costs. Therefore, investments targeted at the poor should be evaluated in advance both as to their positive impacts and their possible negative effects.²⁰

A further instrument used to assist the poor in realising their transport demands is the allocation of subsidies and low fares for certain groups. However, past experiences have shown that subsidies are extremely difficult to target for several reasons. First, because subsidies are mostly captured by transport operators in form of subsidy leakage to inflated operating cost. Second, often property owners (who let their property to the poor dwellers) benefit from increased property values in areas with subsidised services, which might in turn lead to the expulsion of the poor from these areas. Third, substantial proportions of the poorer groups do not even purchase transport services and instead rely on non-motorised transportation.

Thus, transport improvements in form of lower fares do not reach these groups and consequently they do not increase their welfare.²¹

A key concern in poverty reduction is the provision of access to basic services, amenities and opportunities. Enabling people to access job markets, schools,

health care and social facilities will help them to realise daily activities and thereby seize important opportunities. Access to employment is, of course, one of the major issues, yet it is not the only one that needs consideration. For example, schooling as such is an important activity for children, yet it also determines their future chances in the labour market. Likewise, for a pregnant mother to have access to maternal care largely determines the course of her pregnancy, yet it is also important for the health of both mother and child at later points in time.

This is only to give a first impression of the multidimensionality of the issues that need to be considered when a wider perspective on poverty is employed. Since this topic is more related to the concept of social exclusion than to the rather narrow concept of (income) poverty, it will be considered in more detail in the following chapter.

What should become clear from the aforementioned is that increasing overall mobility might not benefit the poor. They tend to live together in the periphery of the city, which is usually worse connected and served compared to inner-city areas. Additionally, low-income jobs such as cleaning, delivery services, maintenance of urban infrastructure, service jobs in catering and gastronomy, all require working at peripheral hours of the day. Likewise, many poor have not one but several jobs, working part-time at different locations, which might change sometimes even on a daily basis. Children might have to earn an income after school hours, and women are forced to reconcile working and domestic responsibilities. All of these requirements lead to transport patterns that go well beyond traditional home-work-home commuter patterns and are therefore more complex; even more so because the poor rely heavily on public transport as well as on walking and cycling.

Overall mobility measures, however, tend to favour peak- and particularly daytime transportation, and, as stated before, they often tend to favour auto mobility. Therefore, in order to improve conditions for the poor, careful attention must be paid to the details of transport projects, which should service the poor.

Residential locations and their equipment with job opportunities and services, spatial relation to business centres and other facilities, available transport means in the area and between the locations as well as financial burdens, etc., all need to be assessed before direct interventions to assist the poor can be undertaken. Likewise, any project should be assessed beforehand not only with regard to the likelihood of fulfilling positive expectations, but also in relation to possible negative and spin-off effects.

When a wider perspective is applied to poverty, the focus should be on social exclusion and the multifaceted dynamics of deprivation at work.

Increasing overall mobility is not an adequate measure to help the poor, since their patterns of mobility are often different from the traditional patterns, both with regard to spatial and temporal requirements.

Therefore, transport interventions aimed at serving the poor must consider their different conditions of life and the thus arising different demands. In short, measures must be explicitly targeted, or else they become ineffective or even have adverse effects.

Transportation and Social Exclusion

Since the early 1990s social exclusion has become a frequently used term in academic and political debates, fuelled by increasing unemployment rates, poverty risks and changes in the market economy of developed countries.

Out of the different levels, on which people or groups can be socially excluded, the economic sphere is the one that is often looked at with the most concern. This is due to the fact that the employment situation determines the financial setting of an individual or household, which in turn is one of the main factors that affect the possibilities to act in other areas of social, cultural, institutional, etc. life.²² It must be borne in mind though that being poor or unemployed does not necessarily mean that a person is socially excluded, and likewise, it cannot be inferred that those who are socially excluded are always poor or unemployed.²³ However, employment remains a crucial factor.

The role of transport was not fully considered in earlier debates on social exclusion. However, in recent years, the appreciation of transport as a means to tackle social exclusion has increased. At the same time, research has shown that apart from the positive contribution transportation can make to an inclusive society, today's transport practice often fosters exclusion instead of reducing it.

Social exclusion as a sociological concept looks back on a long-standing tradition in academic debates. However, within a more practical context it is only a recent addition to the discussions on the future of economies and societies.

The role of transport in social exclusion (and vice versa) has originally not been considered. The more it now enters the debate, the more highly complex interlinkages are revealed.

The connection between transport and social exclusion is multi-dimensional and sometimes difficult to grasp.

Assumption of omnipresence of high mobility deteriorates conditions for people living a low-mobility life.

Mobility-related exclusion can be defined as “The process by which people are prevented from participating in economic, political and social life of the community because of reduced accessibility to opportunities, services and social networks, due in whole or in part to insufficient mobility in a society and environment built around the assumption of high mobility.”²⁴

The British Department for Transport²⁵ names four ways in which people can be socially excluded by transport constraints:

- **Spatially**, because they cannot get to where they want to at all,
- **Temporally**, because they cannot get there at the appropriate time,
- **Financially**, because they cannot afford to get there,
- **Personally**, because they lack the mental or physical equipment to handle the available means of mobility.

Transport is only one factor of social exclusion and must not be looked at in isolation.

Additionally, it must be considered that transport itself is only one out of a wide range of factors that may cause social exclusion. For example, whether or not a job seeker gets employment depends above all on his/her qualifications. Yet in some cases, when the structure of the work place (e.g. requested working hours) contradicts the structure of household organisation (e.g. child care responsibilities after school) it might not be possible for the person to take up the job opportunity if daily commuting time is too long. In such a case, transport is not the reason for the exclusion from the job market, but it provides an additional obstacle.

“Not everyone who experiences social exclusion will necessarily have a transport problem, and not everyone with a transport problem is at risk of social exclusion.”²⁶

Furthermore, the link between transport and social exclusion works both ways. First, and as outlined above, transportation or the lack thereof can foster social exclusion if mobility demands are not met. Second, poor mobility can also be the result of social exclusion, for example, when even low-fare tickets exceed the transport spending capability of households due to lack of income, or when age and disability restrict access to motoring and public transport. Additionally, while for some people transport can be a major factor limiting their opportunities, for others it may not be important at all compared to other factors, such as poor education.²⁷

Call for deepening the understanding of the subject, its consequences and the different factors involved.

As can be seen from the above, simply focussing on access to transport, walking distance to and from the nearest bus stop or reduced tickets for low-income groups serves to disregard the complexity of the links between mobility and social exclusion. A deeper understanding still needs to be gained of the situation in different areas and for different groups of the population.

Past and recent developments in urban and transport planning have created cities, where lack of transport may foster social exclusion.

It seems contradictory first to state that mobility is mandatory in providing social cohesion, only to add in a second step that it might also generate social exclusion. However, this dual role of mobility, and indeed of transportation, is due to the fact that transport systems might either support or hinder full participation, depending on in how far requirements of users are met.

Causes of inadequate transport are manifold, says Britain's Social Exclusion Unit. This holds true for Britain and for other developed countries as well.

Naturally, no transport planning authority has in the past aimed at providing inadequate transportation. Therefore one might ask, why it is then that in a number of places a situation has been created where people are excluded from transport and therefore (sometimes) from participation in necessary activities. The reasons for that are manifold and have been collected and categorised for example by the British Social Exclusion Unit.²⁸ While their research mainly refers to the situation in the UK, a great number of identified causes also apply to other developed countries:

1. Because of the triumph of the car, western societies have been increasingly organised around motorised individual transport, resulting in a situation where the need to travel has become greater and more complex. Likewise, unplanned urban growth of developing cities creates sprawling urban bodies that are seemingly only held together by (automobile) traffic streams. Average distances to work, educational facilities, hospitals and shops increase sharply. At the same time, the disintegration of traditional patterns of work and life (flexible working hours instead of nine-to-five-schedules, greater importance of weekend and leisure trips) create different mobility demands, which are often more easily satisfied by car than by public transport. Thus, those without a car are sometimes stuck with inadequate transport supply.
2. Historically nobody has been, and nowadays often nobody is, responsible for ensuring that people can get to key services, such as work, health and educational locations.
3. Deregulation of transport services and the need of operators to act economically sound often lead to the cut-back of services on less profitable routes. It is of little surprise that these are often the routes where less-profitable, i.e. low-income, households live.
4. Potential solutions are either not acknowledged or held back, partly because traditional transport regulation practice does not allow for innovative developments.

Apart from the outlined institutional- and transport-based causes, other developments that influence the set-up, financial conditions and travel demands of individuals and households may also cause a lack of transport that can not be cured by transport planning. Nevertheless, the potential of transportation to act in order to support people in participating fully in society has neither been fully explored nor adequately made use of.

A large number of people and groups in urban areas do not have adequate access to opportunities due to restricted mobility.

Research on transport and social exclusion often tends to concentrate on people living in rural areas or large urban housing estates with poor access to and from public transport. While of course the transport problems prevailing in these areas should not be underestimated, it is misleading to presume that urban areas, because of the density of their built-up environment, the large amount of inhabitants, the relative proximity of urban functions and the comparably large road and public transport networks, could not be subject to restricted mobility and its consequences.

Church et al. pointed this out for London, stating: *"These studies [in rural areas and large housing estates] do little to provide a wider understanding of the potential strategic role of transport authorities and operators in tackling social exclusion in major cities. This is particularly true in London, with its unique and complex morphology, socio-economic character, mix of housing tenure, and its relatively dense public transport network. (...) Nevertheless, understanding the complex spatial relations between transport and social exclusion in London requires an analysis that goes well beyond an examination of accessibility patterns or localised case studies of transport issues."*²⁹

The same holds true for cities in developing countries. There, conditions might still be better than in rural areas, because the close proximity of poor people living together also allows for building up of social capital. Yet urban travellers are still considerably affected by inadequate transport, and interventions are more difficult due to the heterogeneity of the population and complex market mechanisms that need to be taken into account.³⁰

The adjacent figure demonstrates the relevance for urban areas based on CAPITAL, London Transport's tool for measuring travel time from a specific origin

Car-based organisation of transport was fuelled by economic and social changes and led to negative developments that now need to be remedied.

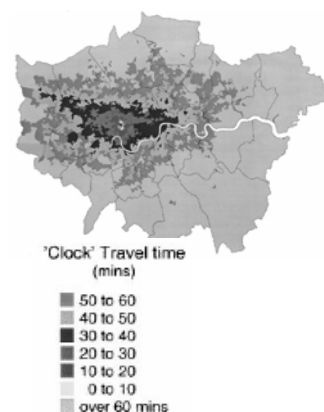
Lack of responsibility for transport accessibility caused social objectives to be neglected.

Social objectives did not seem to pay off for transport suppliers.

Innovation lags behind

Accessibility problems are usually expected in rural areas only, yet people living in urban areas may also quite often experience accessibility problems.

Figure: Accessibility levels to White City regeneration site (Church et al 2000: 202)



In London, about a quarter of the population is inadequately connected to many activities required for full participation in life. This should illustrate that the lack of accessibility is indeed an issue for urban areas.

Concerns about restricted mobility do not so much address lack of movement as such, but rather the consequences that result from immobility.

Insufficient transport affects people and areas differently, however, the consequences might be far reaching.

While access to job markets appears as the most important area, where adequate connectedness is crucial, access to education, health provision, shopping facilities, social and recreational facilities is equally important.

to a specific destination, which takes into account all the main aspects of journey time i.e. walk access time, waiting time, in vehicle time and interchange time.

Using CAPITAL Church et al. uncovered the following: *"The lack of 'connection' between somewhere around a quarter of the capital's residents and many of the activities and opportunities that are required to participate fully in society cause social exclusion in London. There are many reasons why this 'disconnection' occurs, one of which is the inability of people to physically access opportunities because of travel difficulties."*³¹

The main issue of concern about restricted access to areas, and therefore to the activities located there, lies in the consequences which arise out of the lack of connectivity.

Restricted mobility causes reduction of opportunities in various spheres of life.

As stated before, access to work is crucial for the financial situation of individuals and their households, and thus, it also determines the ways and the extent to which people can participate in other activities. But transport restrictions may also have direct impacts on the ability to make use of activities, services, goods, etc. The SEU study analysed data from different sources and compiled the following list on the extent and scope of problems experienced by people with restricted access to private and public transportation:³²

Work: *"Two out of five jobseekers say lack of transport is a barrier to getting a job."* In fact, lack of jobs in close proximity to the place of residence, lack of personal and lack of public transport are listed as the three of the main problems experienced especially by young people seeking work.

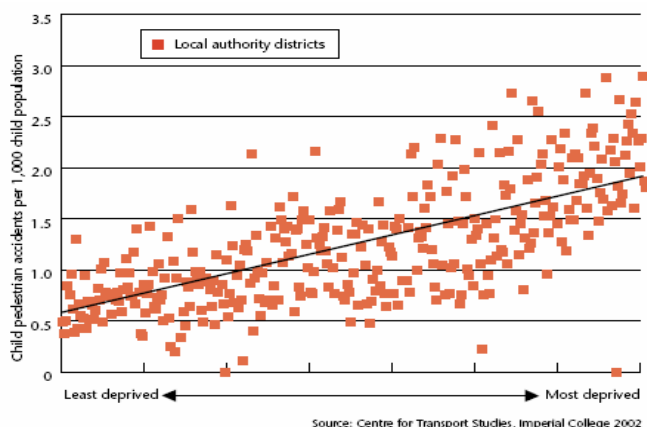
Learning: *"Nearly half of the 16-18 year old students say they find transport costs too hard to meet."* Access to educational activities, which take place outside school and outside official school hours poses problems particularly for low-income groups when bus fares are too high or no transport is available at after-school hours at all. In a survey, young people ages 16 and above know transport costs to be the biggest expenditure associated with participation in education. Adult learners experience similar problems, which keep them from further education and training.

Health: *"Over a 12-month period, 1.4 million people miss, turn down or choose not to seek medical help because of transport problems."* Again, this is an even stronger issue for people without access to private transport. Also, 20 per cent of people find it complicated to travel to a hospital; however, of those without access to a car, 31 per cent experience this difficulty.

Food shopping: *"16 per cent of people without cars find access to supermarkets difficult because of transport problems, compared with 8 per cent of people with access to a car."* Where access to supermarkets is restricted, people are forced to buy their food from expensive local shops. For people in disadvantaged communities, there is often only a reduced choice of food within reach, which can result in poor dietary habits, and consequently, poor health.

Social activities. *"18 per cent of non-car owners find seeing friends and family difficult because of transport problems, compared with 8 per cent of people with access to a car."* The proportions are similar for leisure facilities (9 and 4 per cent) and libraries (7 and 3 per cent). Especially the elderly and young people are affected by transport-related difficulties to participate in social activities. What is more, seeing friends and family matters in itself, but it might also have spin-off effects like the build-up of social networks and social capital.

The impact of traffic: *“Children from households in the lowest socio-economic groups are five times more likely to die in road accidents than those from the highest.”* The worst impacts of road traffic – namely pedestrian accidents (see figure below), air and noise pollution and busy roads cutting through communities disproportionately affect deprived areas and people facing social exclusion. This has damaging effects on the quality of life and can also restrict access to local services by reducing the possibility to walk and cycle.



Source: Centre for Transport Studies, Imperial College 2002

Figure: Child pedestrian accident rates in UK local authority districts by index of multiple deprivation

Source: SEU 2003:18

Comparable studies for developing countries do not exist. Nevertheless, it seems reasonable to assume first, that depending on local conditions more people are affected by comparable difficulties and second, that the consequences might be much more severe. In this regard it is noteworthy that the share of marginalised people with poor access to essential facilities has risen in most cities, even though the share of the income-poor has remained approximately the same over the last 10 years.³³

Naturally, not all of the listed impacts will affect all people and all areas with transport problems alike. People often find ways to overcome transport difficulties substituting, for example, shopping trips with the use of delivery services. However, this also requires certain preconditions, like Internet access and the possession of a credit card. To stay with this example, the accumulation of transport and resource shortages might again prevent those affected from making use of alternative means of supply; meaning low income groups are those with fewer options of replacing transport with virtual mobility.

In this regard, research from Germany shows that in the same way as car ownership is linked to income (most private households without access to a car are low-income) the possession of a computer is linked to household budgets as well.³⁴ This puts a question mark to the often-raised hopes that low-income groups benefit from the growing possibilities offered by information and communication technologies. Albeit in theory this might work, in reality the situation of the households often restricts the possibilities undoubtedly provided by ICT.

In developing countries it appears that more people are affected by accessibility problems. This is even more concerning, since due to the anyway lower level of income of those affected and the overall lower chances in life the consequences are much more severe.

Chances of reducing travel demand by increasing use of information and communication technologies

Socially disadvantaged groups are most vulnerable; however, negative effects of inadequate transport may occur for all members of society.

The above shows that identifying the groups and individuals affected by and disadvantaged fully or partly by a lack of transport and restricted mobility is not an easy task.

It has been pointed out that *“... local authorities often conclude that large-scale socio-demographic categories, the unemployed or single-parent families, or the residents of specific areas and estates are socially excluded. Yet there is no reason to suppose that such populations necessarily suffer from a lack of access and hence social exclusion. It is not obvious what effective access and*

While generally everyone might be, usually not everyone is affected by transport-related exclusion, yet the ‘usual suspects’ appear to be most at risk.

*participation means for different social groups or what mobility 'demands' this brings in its wake. It is, for instance, possible that highly paid commuters are socially excluded from their local neighbourhood precisely because of their high mobility."*³⁵

Excluded or not?

A person, who:

- is only rarely able to afford to journey into the inner city,
 - visits the remote medical care centre only once year,
 - never travels to the shopping mall and leisure centre in the neighbouring community
- might be considered immobile and even excluded from important activities.

Yet would s/he agree with this perception?

Maybe s/he finds the local provisions adequate to his/her needs and prefers the intact neighbourhood network to extensive cultural activities elsewhere. It may also be that s/he has never liked the city centre anyway for various reasons, none of which connected to transport. Or it may be because s/he does not actually know about services, institutions and activities available and open to him/her, albeit in a distance.

For all these, and probably other reasons, this person might feel neither immobile nor excluded. In such a case, is there a need for transport and other interventions at all?

As with all research on exclusion, its causes and consequences, merely concentrating on 'objective' data means neglecting one important dimension of exclusion, namely the perception of the ones affected. Whether or not someone 'feels that his/her mobility is restricted depends on whether he/she is actually aware of what kind of mobility would be needed in order to participate in the activities that are possible, required and wanted for full participation (see adjacent textbox).

Nevertheless, saying that everyone can be affected does not allow for ignoring that in most cases certain groups are more vulnerable and at risk to a) suffer from lack of mobility, and b) experience transport-related social exclusion. To name them, these are low-income groups, women (see later chapter of this paper), disabled people, the elderly, and children/teenagers.

Travel surveys frequently reveal that there are partly enormous differences in the mobility patterns of these groups compared to the 'rest' of the population. However, these surveys usually do not take into account the main dimension of restricted mobility: the trips that are not made, and consequently, the activities that cannot be carried out.

In order to come to a coherent and complete picture, various sources of data and analysing tools must be applied. These might, for example, include the use of existing data from various sources, the already applied techniques of poverty mapping and accessibility mapping. Moreover, important insights can be gained from field surveys that also include the views of the people living in the area.

At present, transport planning in cities does not address the link between transport and poverty/social exclusion.

Theoretically, there already is both awareness of and some knowledge on the role that mobility plays in terms of improving – or degrading – people's quality of life. However, the complex dynamics are often not well understood, which leads to the situation, that when action is taken at all to address these issues those responsible fall back on traditional solutions, namely infrastructure development, improvement of conditions for private transport, and lump sum payments or untargeted subsidies.

Resulting in one part from the lack of insight into the social relevance of transport and in another part from the dominance of economic and sometimes ecologic considerations, transport planning in cities shows little success in achieving social objectives. While these are often acknowledged in official documents and sometimes even form parts, not just add-ons, of transport strategies, little practice experience exists that goes beyond pilot schemes and case studies. This has often been criticised for cities in developing and developed countries alike as the following quotes illustrate:

*„The reality of action however does not always, or even usually, match the rhetoric of official statements and publications. Development projects often fail to integrate different issues and are also frequently locked into a view of the development process, which directly contradicts the principles of sustainable development. Top down, large scale, capital intensive and growth promoting projects heavily dependent on global markets are still being promoted in cities in the developing world, both by international agencies and foreign and home governments, all of whom pay lip service to sustainable development. These considerations apply to transport particularly strongly."*³⁶

When social issues are addressed at all, this is done in a manner that sometimes lacks knowledge and sensitivity for the complex dynamics involved. Consequently, the traditionally applied remedies – like infrastructure provision, untargeted subsidies, better conditions for cars – often fail to deliver.

"Urban transport policy and planning so far, which was geared to MPT [motorised private transport], has proved neither economically nor ecologically sustainable and in no way oriented on the needs of the poor majority of the population. Rather, it was designed to meet the requirements of a small, privileged minority."³⁷

"Neither are the institutional and legislative frameworks in place to deliver the cross-cutting agenda that is needed to realise a policy and funding shift away from supporting increased mobility for highly mobile, high income groups and communities. This means that people living on low-incomes (...) are likely to become increasingly dependent on owning and driving cars in order to secure greater participation in society."³⁸

It takes more than lip service and good intentions to improve mobility options for those who need it most.

Social aspects are often seen as the weaker ones in the triangular approach that is sustainability.

Poverty and Gender

Summarising the above, it appears that the link between mobility opportunities and the economic and social participation of people is as yet only partly explored. Since evidence shows that lack of mobility can reduce chances in all domains of life, it appears only sensible to reason that in turn improved mobility can positively benefit people of all income, age and social groups. However, those most at risk are people of low-income, low social status and generally few opportunities in life. Vice versa, these people are the ones who can most profit from transport policies that include social objectives.

It has been shown however that it is difficult to develop standard solutions to this problem. In fact, detailed stock taking and building up a coherent knowledge base needs to be done on a local level, since urban structure, transport systems, size and allocation of different social groups, and many other factors that are involved in the complex interrelationship of social and transport developments, need to be taken into account.

Another important issue in this context relates to the fact, that both in developed and developing countries the same mechanisms of reduced mobility and exclusion are at work. However, in cities of the developing world the problem is even more pronounced since large proportions of the population live in absolute poverty and need dedicated and targeted assistance in order to merely survive. Naturally, transport is only one of many other factors that determine people's opportunities in life. Nevertheless, up until now it is the one factor, the role and possible contribution of which is not appropriately considered.

As stated before, reduced mobility might not always only affect those groups frequently considered as 'at risk' of exclusion. Yet among those groups that are mainly affected by negative impacts of reduced mobility, it is the 'group' of women that shall be focussed on in the next part of this paper.

Women, while constituting roughly about half of the world's population, are often not appropriately considered in transport planning. However, research on poverty and exclusion shows that they are disproportionately affected:

The overall phenomenon of the 'feminisation of poverty' is becoming an increasingly hot topic of international debates, both in developed and developing countries. Women make up a disproportionate number of the poor, according to some estimates accounting for up to 70 per cent of those living in poverty worldwide. Female-headed households, which in some areas of e.g. Latin America make up 50 per cent of households, are more likely to become or remain impoverished than male headed households.³⁹ In the developed worlds, overall poverty rates might be lower, but here women also face a higher risk. In the Republic of Ireland, for example, research has shown that female headed households face a 24 per cent risk of poverty, compared to 17 per cent for male headed households. Likewise, there has been a rise in poverty of women, both living alone and heading a household, in recent years, while at the same time the risk of poverty for single male households has even decreased.⁴⁰

A summary of the above must conclude that not all interactions between transport and socio-economic dynamics that determine people's quality of life are fully known. At the same time, however, the knowledge already at hand strengthens the need to consider more seriously social objectives in transport policy, planning and operation.

The actual situation and also the transport related effects on poverty and exclusion differ with the local context. Nevertheless, the dynamics that characterise the considered links appear to be similar.

Among the 'high risk groups', i.e. those likely to be first affected by reduced mobility and therefore reduced opportunities, one 'group' shall be explicitly focussed on in the following: First, because worldwide they are most at risk to become impoverished. Second, because their status and chances in life is often inferior to those of their counterparts. Third, because society cannot afford to neglect their demands any longer. Fourth, because they make up half of the world's population. The 'group' thus characterised is that of women.

The reasons for that are manifold and can often be traced back to the disempowered status of women within households and labour markets. Furthermore, the following can be seen as a crucial issue:

"Consideration of poverty often neglects differentials between men and women in terms of their access to income, resources and services. (...) Any poverty-reducing programme may not reach women directly, due to their lack of command over productive resources and control over output, as well as (particularly for poor women) lack of time. The costs of economic restructuring under structural adjustment are often disproportionately borne by women, through increased labour or reduced intake of food, with severe human development consequences for women themselves and potentially for children, especially girls, who may be drawn into household or income earning labour.

Attempts to combat poverty have hitherto neglected the obvious gender based differences. The same applies to transport as well.

Moreover, existing safety-net programmes have tended to target men, explicitly or implicitly. Wider social security and welfare provisions have not taken account of changes in social relations (including gender relations) which are occurring as a result of economic restructuring, as well as political and social conflict."⁴¹

Just like poverty, transport is gendered. The differences between men's and women's transport needs result from their respective roles in life. Since this is often neglected, the transport network creates and supports inequalities that more often than not put considerable constraints on women's life.

Gender and Urban Mobility

Not all women are the same, yet, regarding (not only) transport demand, most women have more in common with each other than with their male counterparts.

*"We do not believe or assume that all women are the same, or that they feel the same about public transport. This is manifestly not so. However, there are sufficiently significant differences between women's transport demands and experiences, as opposed to those of men – differences in access to private transport, in patterns of commuting and employment, in child-care and elder-care responsibilities, in basic attitudes to private and public transport – to justify treating women separately."*⁴²

The statement quoted here clearly and decidedly names the reason for why gender issues should play an important role in transport policy and planning: the everyday lives of women are different from those of men, and consequently, so are their mobility patterns.

Respecting these differences, building up detailed knowledge and developing appropriate measures is a necessary prerequisite to first, find out how transportation systems can be altered to address the needs and wants of women more adequately, and second, to use transportation as a means to improve the economic, social, educational, cultural, etc. circumstances for women.

The information brought together for this chapter draws freely on numerous resources from both developed and developing countries. Main input was derived from the works of Hamilton (2001)⁴³ and Peters (2001)⁴⁴, who each compiled excellent overviews of the state-of-the art of gender considerations in most current discussions on transport planning in different parts of the world.

However, the existing literature also reveals some shortcomings in the past and present research on gender and transportation. In countries of the developing world, a lot of research focuses on women in rural areas, neglecting their female urban counterparts. In the developed world research is often limited to the analysis of causes and the description of problems women experience in transport, yet developing adequate tools to better integrate women's perspectives is often paid less attention.

Recently, a number of activities have been initiated to address issues relating to women and transport in cities, thanks predominantly to the actions of the World Bank, which has commissioned and/or carried out projects and research in a number of urban areas. The lack of tools and instruments to incorporate women's needs permanently into transport planning, however, is a problem that still

Ample research in the past few years has been carried out to identify the causes and to analyse the extent to which women's transport demands differ from those of men; however, the results have not yet been adopted into transport policy and planning

prevails: *"Yet while more researchers and development professionals today are busying themselves with trying to understand gender differences in access and mobility than ever before, still relatively few of the recent insights have found their way back into actual transport planning and policy making practice."*⁴⁵

Nevertheless, some encouraging case studies and pilot projects both in local transport planning and in transport policy making exist, some of which will be presented in the course of this chapter. Considering that on average more than half of the world's population, in some age cohorts and/or parts of the world even more, are female, it is surprising that transport systems still by and large serve the male user better than the female. Allowing for simplification, one would conclude that this still is a result of patriarchal structures, which, even today and even in the so-called modern societies, influence the division of labour and participation in economic, social, cultural and political life in a way that favours men over women. While the aim of this paper is not to dwell on the deeper roots of this situation, it should, nevertheless, be kept in mind and explored in more detail for the realm of transportation.

It must further be noted that with regard to this paper, and because the differences between women's living conditions in countries of varying economic status are enormous and therefore impossible to compare, the information gathered will be presented separately for developed and less developed countries.

Before going into more detail, it must be noted that the differences in transport needs and demands between men and women are not a result of their biological sex, but they result from the different roles attributed to them in social and also in family life. The term 'gender' is therefore increasingly used, especially in academic debates but also in other contexts, in order to distinguish between the biological and the societal 'men' and 'women'.

*"As distinct from 'sex' (which is biological), gender usually refers to socially/culturally constructed (invented) characteristics which are then attributed to the different biological sexes."*⁴⁶

For the majority of people, belonging to one sex means belonging to the corresponding gender: a woman is feminine and acts like a woman, a man is masculine and acts like a man. However, increasingly alternatives to the stereotype sets of gender-determined behaviour gain ground. Nevertheless, it is not always a matter of choice for the individual, but the expectations, given codes of behaviour and agreed upon codes of conduct in a society determine the individual's belonging to a certain gender – and accordingly his/her actions, opportunities, and 'appropriate' behaviour. Over time, the standards and codes can change, which also results in a change of gender-attributed roles.

*"Gender is the cultural definition of behaviour defined as appropriate to the sexes in a given society at a given time. Gender is a set of cultural roles. It is a costume, a mask, a straitjacket in which men and women dance their unequal dance. Unfortunately, the term is used both in academic discourse and in the media as interchangeable with 'sex'. In fact, its widespread public use probably is due to it sounding a bit more 'refined' than the plain word 'sex' (...) Such usage is unfortunate, because it hides and mystifies the difference between the biological given - sex - and the culturally created - gender."*⁴⁷

Distinguishing between the biological and the social is not always as easy as it sounds, and sometimes the terms are mixed up and/or used synonymously. The reason for that has already been mentioned: in most cases women's roles in society are still very much stereotypical female, while men's roles are still very much stereotypical male. In other oversimplified words: The man is the breadwinner and head of the family, and the woman is housewife and mother.

However, focusing on social roles instead on anatomic characteristics means that in cases where a man lives a historically typical female role, like houseman, child carer, etc., he will experience broadly similar difficulties as a woman in his situation does, and vice versa. A woman living the hitherto male life of a business

It is surprising to see that transport planning usually considers the male user first, even though women make up the larger proportion of public transport users. This may be considered to be the result of traditionally patriarchal structures – yet those are changing, albeit slowly and not always without resistance and setbacks.

Different situations in developed and developing countries do not allow for direct comparison.

Differences between male and female transport demands are not biologically determined. Rather, they result from different roles in society.

Using the term "gender" instead of "sex" emphasises that the focus is on allocation of gender roles based on established models and socially accepted behaviour.

Gender and sex are often used synonymously, which is also due to the fact that in most societies the historical equalisation of sex and gender still by and large prevails.

In cases where a man lives a hitherto typical female role, his mobility demands might equal that of a woman in the same situation – and vice versa.

Societies are changing, and a lot has already been achieved. Nevertheless, women and men are still not equal in most domains of public life, and that includes transportation as well.

(wo)man will have more in common with her male colleagues than with their wives who stay at home rearing the children. However, these for the sake of tangibility somewhat constructed examples still remain the exception to the rule.

Despite the often cited western trends of individualisation, flexibilisation and pluralisation of lifestyles, despite the manifold changes that all countries and societies are going through, men and women are still not equal, and consequently their mobility, or rather the way in which their mobility demands are addressed, is not either.

Mobility patterns of men and women differ according to the social roles they are attributed to in everyday life.

There are various reasons for that, only few of which have to do with what women want for themselves:

Women and employment: While women's participation in the labour force has, in all countries of the western world, increased ever since the 1950s, there are still remarkable differences between the working world of men and that of women.

Women participate less in the labour market, are more likely to work part-time, to be paid less, and to be more vulnerable to labour market changes than men – resulting often in economic inferiority.

Women are much more likely to work part-time than men, resulting on lower earnings not only because of the pro-rata reduction, but also because their position in the labour market is much more vulnerable. But even if men and women work in the same position with the same work hours, women are often paid less than men. Additionally, the higher the position in the job hierarchy, no matter what business sector, the smaller is the share of women employed. The reasons for that can be identified following Hamilton: *"This is because of women's weaker attachment to the labour market, which is in turn linked to their customary caring roles with families. [...] Additionally, women have fewer employment options than men: domestic and childcare responsibilities impose heavy restrictions, and the availability (or not) of good quality surrogate childcare is a key factor in enabling women to take up employment."*⁴⁸

Women take over the majority of unpaid domestic labour, family responsibilities, etc. often as an add-on to their jobs, which results in time-poverty and unequal distribution of responsibilities

Women and domestic labour: Women entering the labour market did not and do not automatically encourage men to start entering the world of domestic labour. Women are often forced to expand their role, rather than achieve gender role equality. They are thus forced to adopt the roles of paid employee; unpaid domestic labourer, carer of children, sick and elderly people and possibly students at night, trying to improve their career options. Numerous studies show that for women time off work is not time for themselves. Rather, it is time used for family, household and other domestic purposes. In some countries the number of men, who take over responsibilities in domestic life, increases, yet it does so on a low level and at a slow rate. However, research from Germany suggests that at least in developed countries this is not due to men taking over more domestic responsibilities, but to women spending less time with household activities because of improved technological household equipment, use of pre-fabricated or ready-made products, outsourcing of domestic labour, decreasing number of children per household, etc.⁴⁹

Women are more vulnerable to physical attacks, harassment and violence. This is in part due to their physical characteristics compared to those of men, however, violence against women is also a societal problem.

Women and vulnerability: The issue of women's greater vulnerability to attacks, harassment and violence is probably the only difference to men where not gender roles, but indeed physical characteristics play a major role. Because of their size, bodily strength and relative slowness in moving and running they are often inferior to the physical conditions of men and thus, more likely to become victim of attacks. In all developed countries, the number of reported rapes has increased over the last 20 years. While some of this increase is certainly due to increased reporting and improvements in societal reaction and policy procedures *"... the perception that we live in a climate of increasing crimes against the person, to which women are especially vulnerable, is a salient factor impacting on women's behaviour."*⁵⁰ Nevertheless, not all of predominantly male violence against women is attributable to physical difference, but is also due to the male perceived inferiority of women, which makes it *"... a citizenship issue."*⁵¹

Having described the various realms – working life, economy, family life, household, safety, etc. – it would be rather surprising not to find these differences to influence transportation. In the past, scientists, planners, politicians, economists, etc. have often dismissed these differences as ‘soft-science’ arguments, yet they do have important implications first, for the life of women themselves, and second for society as a whole.⁵²

Keywords for describing and analysing the difference in mobility patterns of women are: complexity, access, reliability and safety.

In **developed countries**, a number of recent studies have revealed how the differences in women’s living conditions translate into mobility and transportation. Likewise, there is profound evidence for the particular differences of transport patterns of women in cities in developing countries, albeit detailed data is still missing.

In the developed world, travel patterns of women can be described as follows:

- The total number of daily journeys is fairly evenly split between men and women.
- Men travel longer distances per day than women, who (whether as a cause or a consequence of this is difficult to decide) in turn make more walking and public transport trips per day than men.
- The majority of journeys for both men and women are made by car however typically men are drivers and women passengers.
- Women still hold fewer driving licences than men, albeit in many countries the proportion of licensed women drivers is increasing and is projected to reach equal levels in the near future.
- Even with a driver’s licence, women are less likely to own or have permanent access to a car (UK: only about 2/3 of female licence holders are the main driver of a household car compared to 4/5 of men).
- The transport purposes between men and women differ: For men the ranking is work – leisure – family; for women it is family – work – leisure:



- Trip chaining is predominantly a phenomenon of female mobility. Women are more likely to make journeys with more than one purpose. However, research in the UK and the USA (see adjacent figure) showed that men also trip-chain, yet for different purposes.⁵⁵
- Apart from satisfying their own travel needs, women are also often responsible for ensuring their children’s mobility, thus, taking on a ‘chauffeur role’⁵⁶, for which the term ‘mama taxi’ has frequently been quoted. In fact, women are not only responsible for children’s travel to and from day care, school, etc., but they are often a ‘means of transport’ for leisure time activities, too. The time and money thus spent restricts women’s own freedom to move and participate in daily activities.⁵⁷

With all the gender-related differences in living conditions – how could one think transport demands should be the same?

Evidence from developed countries shows how women’s different roles in life translates into different mobility patterns and consequently transport demands

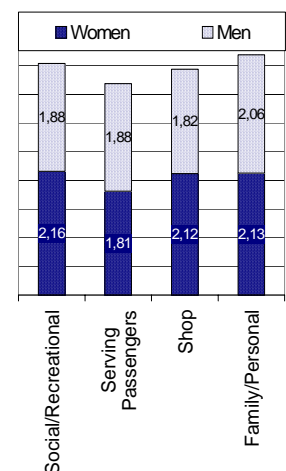
Figure: Different transport characteristics of men and women

Source: UK National Travel Survey 1999-2001

	Men	Women
No. trips per year	1,076	1,035
Annual distance covered (km)	14,811	9,917
Percentage holding full driving licence 2001 (1975)	82 (69)	60 (29)

Figure: UK: Trips per adult (16 and older) per purpose
Source: National Travel Survey 1999-2001⁵³

Figure: US: Mean number of stops by purpose on the way home from work
Source: McGuckin et al. 1999⁵⁴



- Due to different work schedules, likelihood of part-time employment, greater proportion of social visits, etc. women travel more often off-peak than men.
- Because of fear of violence and aggression women are less willing than men to travel after dark. As a result, they restrict their movements after dark.

In fact, the issue of safety is one of the most important aspects that determine women's behaviour in transport. Evidence exists that women are more often victimised in public transport than men.⁵⁸ And even if, from an objective point of view, a transport system might be considered a safe environment for women, there still remains the factor of subjective concern, fear and negative emotions.

Especially waiting at the bus stop, transferring e.g. from one bus to another, walking to and from public transport stations, cycling at nighttimes, are all potentially dangerous situations for women, and accordingly, are dreaded and tried to avoid if possible. Overcrowding in public transport also generates a feeling of vulnerability to sexual harassment. This kind of fear produces stress and high levels of anxiety, which can affect the well-being of women.

In **developing countries**, the overall patterns are somewhat similar. However, in many developing and transformation countries, the traditional division of roles and responsibilities in the labour market, family and community is often even more pronounced. Additionally, the difficult economic situation many women find themselves in (poverty among women is often higher than among men), cultural traditions, public provisions and legislation as well as climatic circumstances also affect women's travel patterns – more often than not for the worse.

The following compiles a first list of additional aspects that need to be taken into account regarding women and transport in less developed countries:

- Car access for women is highly restricted, first because motorisation rates in developing countries are generally lower and car ownership less standard than in developed countries. Second, even if a family is able to afford a car, it is usually reserved for the man.
- While non-motorised transportation is the most common way for women to travel, they are often refused to ride a bicycle: *"Riding a bicycle is considered unsafe and 'unladylike'. In many countries in Africa, if a woman rides a bicycle she is considered 'loose' or overly independent. In Iran, the cultural taboo about women riding bicycles has been institutionalized in a law that bans women from riding in public places."*⁵⁹
- Women's opportunities to raise an income are often restricted, and many women are stuck in low-wage jobs. Additionally, urban areas increasingly develop gendered labour markets, especially in the Latin American and Asian textile industries. Since housing in close proximity to these labour markets is often not available, daily commutes of five hours or more are not uncommon, especially when the place of residence is in peripheral settings with poor public transport accessibility.⁶⁰

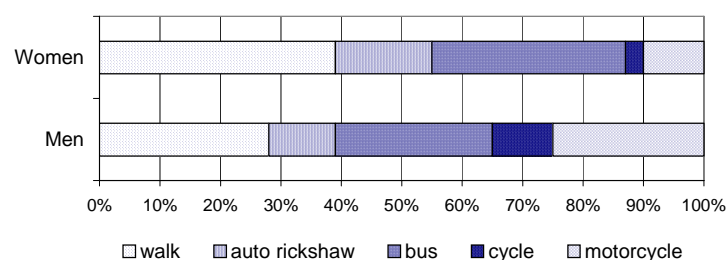
Safety from attacks and also the absence of subjectively felt fear determine women's transport moves

Data on women's transport needs in developing countries is hard to get. While a lot of aspects can be considered similar to the situation in developed countries, different local economic, cultural and social circumstances create additional issues for women's travels.

Women in the developing world heavily depend on non-motorised transport, yet they are often not allowed or not able to ride a bicycle, leaving them dependent on their feet as the only available mode of transport.

Figure: Modal split for trips (all purposes) of men and women in Pune, India;

Source: Astrop 1996 ⁶¹



- Low income households often depend on women to be involved in a heavy exchange of time favours in order to meet their domestic and travel needs, which results in female trip making to require major exercises of co-ordination with others.⁶²
- Especially in Africa, women and girls themselves are considered “a major transport form”⁶³, carrying agricultural goods in rural areas, but also in urban areas back- or head-loading heavy and bulky goods is a common way for women to transport supply goods, merchandise or family and household supplies.⁶⁴
- Additional carrier and transport responsibilities result from the following: “It has been estimated that at any given time, one third of all women in the developing world are either pregnant or lactating [...]. Child carrying has to be accommodated in a way to still guarantee the safety and well-being of the child, further reducing women’s ‘maximum carrying capacity’”.⁶⁵

Transporting goods for private and business purposes ‘by woman’ is a common form of ‘freight transportation’, especially in Africa

Shortcomings in transport provision for women, both in developed and developing countries, are of major concern, not because of the fact that travel alone is restricted, but because limitations in mobility lead to limitations in women’s opportunities:

“Transport plays a significant role in either exacerbating or ameliorating the relative disadvantage of women. Transport poverty is very evident in many parts of the[...] world, and this compounds the many other difficulties associated with living on a low income. Poor transport options limit access to employment and social support networks, and to health, recreational and sports facilities, restricting both quality of life and ‘life chances’.”⁶⁶

Taken all of this information together, a picture of women’s mobility patterns emerges that strongly questions the adequacy of current transport planning and provision. Restrictions in access to transport means, dependence on public and non-motorised transport, trip making and chaining for purposes other than work, transport costs causing high financial and time burdens coupled with the different, and often inferior, standing of women in societies all highlight the need for gender sensitive transport planning.

Summary: Women’s travel needs require including a gender sensitive perspective into transport policy, decision making and planning

However, before discussing possible measures to address hitherto neglected differences between men and women, it must again be emphasised that there is no such person as THE women. Women’s transport demands, just like those of men, differ with their economic and social position, household characteristics (most notably with regard to children), age, lifestyle, etc. So talking about women’s transport needs must not forget to respect the diversity that prevails among women and men alike.

Gender based interventions into the transport system present themselves as appropriate reactions to female patterns of mobility.

In order to take into account identified differences in female travel patterns, appropriate actions must target explicitly these differences.

Consequently, if female mobility patterns are more complex, transport connection must no longer be organised along routes and corridors solely, yet they must also open up areas where activities other than work take place. Likewise, since women have less access to private means of transport, they must be enabled to easily and comfortably access public transport. As women make up large shares of non-motorised transport users, conditions for cycling and walking should be improved. Taking into account their transport purposes calls for ensuring adequate servicing of relevant activity areas also in off-peak hours and the provision of space for storing away baggage, prams, etc. The perception of danger and the risk of being exposed to attacks and harassment also call for targeted safety measures. These are only examples of measures, the application of which always needs to respect the local context. A more comprehensive,

Gender targeted measures need to be developed and implemented in line with the overall transport situation of each city and within the economic, social, cultural, etc. context.

however, by no means complete list of possible interventions to public transport networks is provided in the following table.

*Table:
Measures to improve
transport conditions for
women ... and other
transport users*

Source: Spitzner 2004⁶⁷

Accessibility	Spatial	<u>Servicing areas that hold relevance for activity demands of women</u> <ul style="list-style-type: none"> ▪ Dense public transport network coverage instead of servicing along corridors and routes ▪ High density of bus stops/ stations ▪ Door-to-door services
	Temporal	<u>Public transport services at all relevant times (instead of sole prioritisation of commuter times)</u> <ul style="list-style-type: none"> ▪ Synchronisation of transport schedules with child care / part time work / social infrastructure schedules <u>Shortening of entire travel duration</u> <ul style="list-style-type: none"> ▪ Dense service schedules ▪ Ensuring transfer to other public modes ▪ Short distances to and from stops ▪ Punctuality
User friendliness	Social	<u>User friendly structuring of tariffs</u> <ul style="list-style-type: none"> ▪ Uncomplicated ticketing ▪ Transferability, possibility to take along other persons (children) ▪ Free take along of bicycles, baggage, etc. <u>Design</u> <ul style="list-style-type: none"> ▪ Vehicles: overground, clean, pleasant ▪ Stops/stations: waiting areas, information display, furnishing, approachability of service personnel
	Technical	<u>Overall guarantee of minimum standards</u> Vehicles: <ul style="list-style-type: none"> ▪ Barrier-free accessibility, seats, racks, room for storing prams, baggage, bikes, etc. Stops/stations: <ul style="list-style-type: none"> ▪ Racks and storage areas, appropriate size and seating, weather protection, availability of information, unhindered accessibility ▪ Spatial and temporal barrier free ▪ Easy connections to cycle and pedestrian networks
Safety	Accident protection	<u>In vehicles</u> <ul style="list-style-type: none"> ▪ Safe entry/access areas; safe storing of bags, bikes, prams, etc. ▪ Handholds, railings, etc. ▪ Considerate driving <u>At stops/stations, access and departure routes</u> <ul style="list-style-type: none"> ▪ Safe pedestrian and cycle paths, road crossings ▪ Safe waiting areas, appropriate distance to roads ▪ Servicing (snowploughs, shades, maintenance, etc.)
	Protection from physical and psychic violence	<u>Service provision</u> <ul style="list-style-type: none"> ▪ Evening, off-peak times: door-to-door service <u>In vehicles</u> <ul style="list-style-type: none"> ▪ Possibility to contact driver and staff <u>At stops/stations, access and departure routes</u> <ul style="list-style-type: none"> ▪ Bustle, lively environments, social control ▪ Lighting, escape routes ▪ No hiding places for potential offenders

As mentioned before, in **developing countries**, cultural and economic conditions as well as the present state of transport planning may require different approaches. Affordability, thereby, is a key issue, even more than in developed countries. Also, two kinds of special services are often considered useful.

First, women-only services are often seen as useful in that they provide easier access at higher comfort (because of less overcrowding) and limit the risk of harassment and violence. Additionally, they reduce the difficulties in certain cultural settings where women are not allowed to travel in the same vehicles as men. However, experiences have proven such services to be a two-edged sword.

- In Mexico City's subway, there have been separate cars for men and women on three main lines during peak hours ever since 1978. The measure seems to be successful, as it has improved women's satisfaction with urban transport and their ease of access and use. Furthermore, it is considered a useful measure that can be implemented at low cost.
- In Pune, India, segregated commuter trains had also been a popular idea among transport planners. However, women did not think sex-segregated bus services were a useful idea, and instead, they opted for added bus services for everyone.
- In Dhaka, Bangladesh, special bus services had been in place from time to time in the 1980s and 1990s, yet since the chosen route did not match women's travel demands they ran at low profit and were finally stopped. Surveys showed that women would like to have segregated bus services back, yet the routing needs to be in line with their areas of activity.⁶⁸
- In another Bangladeshi city, Chittagong, women buses were just introduced in April of this year on different routes. Waiting areas and ticket sheds are also segregated, thus separating men and women along the entire travel chain. While city officials welcome this initiative, it remains yet to be seen whether the routes satisfy women's transport needs. Problems might arise from the fact that ticket costs for those special buses are one and a half times higher than the regular fare.⁶⁹
- Additionally, Tehran (Iran) and Lahore (Pakistan) have established women's buses. Colombo (Sri Lanka) has, in turn, abolished the segregated service, even though a lot of women approve of it.⁷⁰

These experiences show that women-only services must fit in with their transport demands, and they are only useful if women themselves accept them. It stands to reason that in many **developed countries** these segregated services would not be accepted easily, and other measures to improve safety seem more promising.

A second special service for women, which could however be also extended to suit men's travel needs, relates to connecting educational and employment facilities with the places of residence. Employer-organised transportation, shuttle busses, etc. all belong to this category. These are already in place in many cities of the developed and the developing world. For example in Dhaka they were put into place to serve the garment factories that are poorly connected to public transport. While they had intentionally not been implemented for females only, they are de facto women's services since women make up the overwhelming share of the garment workers in the respective areas.⁷¹

Developing countries often need to implement different approaches, catered to suit the different needs of women in transportation.

Women-only services can make travel easier for women, yet they are not appropriate in all cultural contexts.

Experience with segregated transport services is a two-edged sword. Whether or not they are rated successful depends on a number of factors. However, it appears to be most important that the routing of the buses serves women's demands, prices are adequate to user's financial capacity, and integration into the overall transport network takes place.

Gender targeted services will benefit both men and women like the example of special services for workers to connect their employment with the place of residence show. These are quite frequently put into place in developed and developing countries alike, yet they are often privately initiated by e.g. employers.

A transport system that takes the gender perspective into account will benefit all users alike.

After having constituted the differences and variations between the mobility patterns of men and women and having also mentioned first possible measures, it stands to ask what a gender sensitive transport system would be like.

Creating equal mobility opportunities will serve a wide range of different people. The elderly and the disabled will benefit from barrier free access as well; men carrying home large shopping bags will value the availability to store them away safely just as much; children and teenagers will profit from the network more than from the current linear character of transport connection; and so on.

Integrating gender issues in transport must no longer be seen as an 'orchid discipline'. In order to do so, gender-disaggregated data collection, more coherent knowledge basis, and most of all the participation of women in transport planning are major framework conditions.

Dhaka Urban Transport Project
One of the conditions of the World Bank for supporting the project financially was to introduce premium bus services, with more comfort, safety, and reliability, which would have benefited women. However, these buses proved to be unaffordable for many women, and even though poor accessibility for women to the existing bus system has long been identified as a problem, it still remains to be addressed. Additionally, the private operators were not willing to provide 'women-only buses' (which had also been an objective of the World Bank funding), since it was noted that, culturally, women do not travel alone, and so the operator would have to run these buses at a loss. Furthermore, NMT-free roads were established, aiming at reducing congestion, improving traffic safety, improving traffic management, etc. An impact study showed that especially in the neighbouring less accessible and poorer areas of residence, the operators (rickshaw) and users of NMT were adversely affected, and women and children faced new difficulties in their travels to school, work and hospitals.⁷³

The answer appears to be as simple as it is significant. A gender sensitive transport system would be one that is of advantage to all users. First, because it enables not just women, but all people whose mobility patterns are complex, to be mobile and participate in economic, social, cultural, institutional, etc. life. Second, it thereby, enhances the options and the quality of life for people whose mobility had been restricted. And third, by increasing opportunities in life for large parts of the urban population, the urban economy, urban life and urban society as a whole will largely benefit. This somewhat idealistic, and as critics may say exaggerated, expectations are nevertheless true and follow the simple train of thought that has been explored in detail in previous chapters. If mobility is regarded a prerequisite for participation in urban life, than an improvement of the mobility opportunities of people will in turn enhance urban society. Naturally, for planning purposes the overall statement of equal mobility opportunities is difficult to operationalise, yet it is by no means impossible.

Ensuring that gender issues are not seen as an add-on, yet as a permanent fixture of transport provision.

The gender bias in transportation can only be alleviated if gender issues are no longer 'orchid aspects' but a self-evident part of transport policy. A necessary prerequisite for that is the gender disaggregated data collection and analysis to build up the required knowledge for the local conditions and demands of women. This, however, can and must not be done without actually involving women, both as professionals and within the framework of public participation. In order to do so, first the attitudes of transport planners, politicians and other decision makers need to be changed in order to create awareness for gender issues and the necessity to better include women in transportation. Also, transport, as well as social and labour market policy, should be better integrated, and women should be encouraged to join the higher ranks of transport planning as well as the boardrooms of transport providers.⁷²

If, however, transport measures to serve women are seen merely as an extra, there is a high risk that they either will not be implemented at all, or that they will not last much longer than the initiating period. In this regard, an interesting lesson can be learned from Dhaka.

There, under the World Bank's Japanese Trust sponsored programme 'Integrating Gender into World Bank Transport Programs' a study on the Dhaka Urban Transport Project (DUTP) had been carried out.⁷⁴ The DUTP had originally also included a gender component, resulting, for example, in a working paper 'Mobility of Women'. However, when the project was realised, the gender aspects were not only neglected, in fact, the DUTP led to adverse effects for women (see adjacent textbox). The failure to address gender issues on a practical level can also be seen as a result of the fact that there was no clear administrative responsibility for incorporating gender issues in Dhaka, and the World Bank apparently did not act strictly enough to foster the ongoing process of integrating a gender perspective.

Another valuable lesson learned from this is that mainstreaming gender into the transport sector can easily encounter difficulties if traditional cultures or practices are in opposition to gender sensitive transportation. Remaining with the example of Dhaka, restricting NMT reduces women's mobility to a larger extent than one would suggest mainly because the social institution of *pardha* (or *purdah*, i.e. gender-segregating access to public areas, which is common in most Muslim societies) makes it impossible, or at least difficult, for women to share crowded public transport with men. This is why cycle rickshaws are such a viable option for women.⁷⁵ However, these are seen by transport planners as slow and old fashioned, and therefore, not in line with the intended 'modernisation' of transport systems leading to restrictions or even complete abolishment (not only in Bangladesh, but also in India and other Asian and Pacific countries).

In order to make sure that the gender bias is addressed coherently and on all levels, those responsible must be more aware and sensitised for this issue. And naturally, those that know best about women's transport demands are women (or, as indicated before, men that find themselves adopting female social roles). In order to do so, a stronger involvement of women in transportation at all levels of planning, policy and operation is urgently needed.

"Planning is a man, Madame."⁷⁶

Transport planning still is a male-dominated domain, and lack of female participation leads to women's voices not being heard. This holds true for all stages of the transport planning process and also for transport operation.

As mentioned before, gender disaggregated data is often not available. In some developed countries, namely the UK, recent years have shown a welcome and increasing trend towards gender disaggregation of travel statistics. Nevertheless, there still is a lot of room for improvement, and the knowledge of gender difference in travel statistics remains as yet incomplete. The problem often is that the gender sensitive travel surveys are carried out on a regional basis in a once-off manner, so that data comparability and analysis of long-term trends are not possible.

*"There are also problems in tracing some historical trends for example, it is only recently that shopping trips have been disaggregated from personal business trips, and escort trips from 'other' trips. The previous lumping together of these categories is just one example of how androcentric assumptions can distort perceptions of women's travel. We should also be alert to the fact that many tabulations exclude journeys under one mile – most of which are made by women and children."*⁷⁸

When it comes to planning, women are deplorably underrepresented at all levels of the policy and decision making as well as the transport planning process (see adjacent textbox for figures on women's representation at top-policy level). This might be related to the fact that transport planning as such has, for a long time, had a strong infrastructure and technical focus, which preserved its male perspective. As one out of the 96 per cent of male transport planners in Austria (anonymously) pointed out: *"The problem is that the decision makers in transport planning are usually men, aged between 35 and 55 years, and mostly they are technicians. Being technicians, they only care about infrastructure, humans are not on their agenda..."*⁸¹ His female colleague in turn said the following:

*"Acknowledging the gender related perspective especially in the very much male dominated policy areas like urban development, and moreover, putting it into real action happens once in a blue moon. In some thematic areas, women are not considered at all, foremost regarding those that are considered 'hardware' or 'technical'. Here women are confronted once again with the prejudice, they would be mainly interested in social and ecological aspects. As if men would not care if their children suffer from 'fine dust cough', and women would never get stuck in traffic jams on bottleneck roads!"*⁸²

Comprehensive studies of women's positions, tasks and experiences in transport planning are rare, and comparable data is lacking. Anecdotal evidence as well as everyday experience, however, underline the view issued in the already quoted Austrian study that the consideration of gender aspects and the realisation of gender focussed projects is an 'orchid discipline'. An 'ironic' comment thus stated: *"Women are a bit important, one can adorn oneself with this (...) minority issue."*⁸³ Such a comment can be understood in such a way that if there is time and money for it, it does no harm to include gender issues in the planning process. This perception, however, is fatal and apart from causing social and equity concerns it is also economically most unsound:

Women, both as expert and 'lay' professionals, need to be involved in planning, strategy development, decision making and all other areas that constitute the transport planning system.

*"As we know, planners behave as if transport has no specific gender features, but the evidence from research is that there are indeed specific features."*⁷⁷

The lack of gender-disaggregated data leads to a lack of knowledge on issues and trends in female travels.

Women in Transport Policy:

*At present, out of the 51 developed countries that are either full members (43) or associated members and observer countries (8 plus 1) of the European Conference of Ministers of Transport (EMCT), only five, namely Spain, Finland, The Netherlands, Sweden and Norway, have a female transport minister.⁷⁹ This relates to a proportion of only 9%, which is considerably smaller than the share of women in other fields of policy. A study conducted in 2003 in 180 countries worldwide revealed "Women ministers remain concentrated in social areas (14%) compared to legal (9.4%), economic (4.1%), political affairs (3.4%), and the executive (3.9%)."*⁸⁰

Women as main users of public transport are an economic force. Thus, gender sensitive planning is not only a social, but, for institutions, operators, companies, etc., an economic issue.

Study results from Australian transport companies state that:

- On average 8% of employees are female, the majority working in lower-paid segments;
- Most women are employed in clerical and administrative positions;
- Only 11% of senior positions are held by women;
- Women in highly qualified positions are usually engaged in marketing, communication and service departments, not in transport strategy and planning.

Lack of women in transport planning is caused also by factors outside the transport domain itself and rooted in societal conditions, for example, in schooling and educational practices.

A female transport planner speaking out for more gender sensitive planning is often 'branded' as a feminist, instead of being regarded a true professional.

"Women are far and away the prime users of public transport, especially of buses. It has to be in the interests of operators to cater for the specific needs of this group. It is not clear why operators have neglected women's views, but it certainly is the case, to the extent that women are deserting public transport in droves. Virtually all the recent increase in car-use is attributable to women. They are less and less a captive audience: the message to operators and policy-makers is clear – Know your market!"⁸⁴

A study examining workforce statistics for five major public transport providers from various Australian states came to the following conclusions regarding the role of women in transport planning and operation:

"Across the five organizations examined, women averaged 8.4% of the total number of employees with the smallest representation being 4.9% (...) and the largest 11.2% (...). As is typical of most organizations and industries, women working within public transport tend to be concentrated in lower-qualified, lower-paid jobs. (...) These women are predominantly employed in secretarial and clerical roles but this figure of 23.9% is still woefully short of the 75% national clerical administrative workforce participation rate. (...) Granted that, over time, a greater number of females are gaining positions in middle management ranks, however, very few work in the top echelons of these organizations. When exploring where women feature in senior management, an analysis was undertaken of those employees earning greater than \$50,000 per annum. A total of 174 employees earn more than this, 20 of whom (or 11.5%) were women. In general, those women who do attain senior positions tend to be concentrated in human services and marketing roles and rarely in metropolitan strategy or transportation planning. (...) These statistics generally confirm what is obvious to almost everyone; women are clearly under-represented and, in essence, are still very much on the periphery rather than at the centre of public transport planning and provision."⁸⁵

The reasons for the lack of women in highly qualified, strategic and senior level positions are manifold and include employment policies of institutions, planning bodies and operating companies as well as women's choice of college and (girls' choice of school) subjects, which more often than not reflect traditional patterns, i.e. girls do art and social sciences, boys do maths and construction.

Another less documented, but often felt and sometimes commented upon, effect also comes into play: women, who have entered senior and managerial positions start, themselves, to neglect the gender factor. The rationale behind this is difficult to assess, but it might have something to do with the following:

*"There is the difficulty caused not by being a woman working in a male-orientated transport environment but of being a woman **who is outspoken about women** [sic.] in a male-orientated transport environment - an unenviable task. Some women avoid talking about women's transport needs as a separate, important issue in case they are labelled a 'feminist' and branded with the stereotypes that this word supposedly implies. There is the feeling that women's issues have 'been done'. A common argument linked to this stance is that discussing 'women's transport needs' is demeaning to women because it lumps women together instead of recognising important cultural and social differences. A combination of these phenomena is probably the reason why there seem to be so few voices speaking out at the moment simply for women."⁸⁶*

Nevertheless, in transport, as well as in other domains of public and social life, some progress has been achieved in recent years, and a number of new projects and practices have been brought underway by dedicated transport planners – both, male and female.

However, case studies and good examples are not enough, which is why the following will introduce a more comprehensive and integrated strategic approach to gender sensitive planning.

Gender Mainstreaming provides a strategy approach.

In order to ensure that gender sensitive planning, in various fields of policy, is more than just a label, gender mainstreaming is increasingly implemented as a top-down strategy, supported by bottom-up approaches.

The concept of gender mainstreaming first appeared during the 1985 Third World Conference on Women in Nairobi. Afterwards, the idea was further developed in the UN development community and was formally featured in 1995 on the Fourth World Conference on Women in Beijing. As a comprehensive, overarching strategy it constituted a reaction to the fact that past activities to resolve the gender bias had not been as successful as anticipated:

*"In efforts to promote the advancement of women and gender equality over the past few decades the approaches or strategies adopted have changed significantly. Initial efforts were focused on separate targeted activities for women. While many of these efforts produced positive results, particularly for the limited numbers of women who could benefit directly, this approach did not tackle the structural constraints to gender equality. (...) In the 1980s a new approach evolved, the mainstreaming strategy, which aimed to make the goal of gender equality central to all development activities. The term mainstreaming came from the objective to bring attention to gender equality into the mainstream of development activities. An important element in the mainstreaming strategy is the ambition to give attention to gender equality from initial stages of processes so that there is potential to influence goals, strategies and resource allocations and thus bring about real changes in policies, programmes and other activities and make a real difference to gender equality."*⁸⁸

The mainstreaming strategy is cross-sectoral, i.e. it is utilised in all sectors and areas where the principal object is not the promotion of gender equality, but the achievement of other aims. In other words: the objective of transport planning is still to improve transport conditions, albeit through the application of gender mainstreaming this should be done in such a way as to improve conditions both for men and women. In transport planning, mainstreaming involves taking up gender equality perspectives as relevant in data collection, analysis, development of aims and objectives and advancing of appropriate measures. Likewise, monitoring and auditing tools to evaluate the outcome also from a gender perspective are to be put into place. From this it becomes clear that there is not one person responsible for gender mainstreaming, but there are different persons on all levels and in all bodies involved who take up the task of mainstreaming. Nevertheless, shifting responsibility for promoting gender equality from specialists to all levels does not imply that there is no longer a need for gender experts. Especially during initial periods when neither the concept nor the steps and concrete tasks are clear, expert advice will still be needed:

*"Gender specialists should, however, have new roles – catalysing, advising and supporting the efforts of others rather than doing mainstreaming themselves. Effective roles for gender specialists require adequate allocation of resources, clear mandates and strategic location within organisations. Specialists require the strong support of, and direct access to, senior management levels."*⁸⁹

Thus, mainstreaming does not automatically and at once replace the need for targeted, women-specific policies and programmes and positive legislation. For transport, this might mean that gender mainstreaming is applied to developing the new urban transport plan, and additionally special schemes, like separate participation activities for women, or a duty to have a minimum proportion of female transport planners in all bodies involved. Mainstreaming and empowerment of women are complementary strategies.

The process of gender mainstreaming (in the following described for transportation planning) should be carried out in stepwise manner:

*Gender Mainstreaming is a globally accepted strategy for promoting gender equality. Mainstreaming is not an end in itself but a strategy, an approach, a means to achieve the goal of gender equality. Mainstreaming involves ensuring that gender perspectives and attention to the goal of gender equality are central to all activities - policy development, research, advocacy/ dialogue, legislation, resource allocation, and planning, implementation and monitoring of programmes and projects.*⁸⁷

Gender mainstreaming is cross-sectoral, meaning it should be applied in all areas even where gender issues are not the predominant objectives, but where, nonetheless, decisions are made that in turn will have an effect on gender relations.

The introduction of gender mainstreaming into a process or organisation does not mean that there is no longer a need for experts on gender issues. In fact, quite the opposite is true, since especially in the initial phases of gender mainstreaming, expert advice is urgently needed.

Gender mainstreaming is a stepwise process, which starts at initial stages of any project planning and consideration and pays attention to factual aspects, such as the definition of aims that also respect gender issues, the development of appropriate tools and instruments to identify necessary areas of action, as well as the involvement of actors, both from institutions and from the broader public, and finally the application of evaluation tools to assess the success of measure – always, but not only, with a focus on gender.

Implementing gender mainstreaming is not an easy task, but it takes a change of perspective and the willingness of actors to open up to new requirements and methods.

The ‘red thread’ in this paper ran from the overall definition of mobility and social cohesion and the link between those further on to more detailed and practical topics like combating poverty and social exclusion by means of transport improvement.

Thereby, it was frequently emphasised that mobility is a prerequisite for individuals and groups for participating in all spheres of urban life. Equality of mobility options therefore also means fairer distribution of opportunities in life.

- First, **linkages between gender equality and transport** are to be assessed. Initial evidence as to these links are, for example, provided in this, and in many other papers.
- Second, the **opportunities for introducing gender perspectives** need to be identified while planning activities are undertaken. For transport, these are manifold and include service, scheduling, routing, promotion of modes, etc.
- Third, an **approach or methodology** is to be designed that will allow for gender perspectives to be successfully incorporated. This might include developing participation schemes, assessment tools, quality descriptions, etc.
- Additionally, **institutional development** and capacity building in terms of developing guidelines, utilising the advice of gender specialists, providing competence development for all personnel, etc. is also required to support gender mainstreaming.⁹⁰

Gender mainstreaming tools include gender disaggregated data and statistics, communication tools, cost-benefit analysis considering gender aspects, gender expertise, checklists containing relevant criteria, etc.⁹¹

Integrating gender mainstreaming in planning and working routines on different levels is an ambitious undertaking, which will take some more years before it may become a common practice. Taking both gender perspectives, male and female, into account needs some training and encouragement, which can only arise if the necessity and usefulness of gender mainstreaming is a deep-seated fixture in decision makers’ minds. Without expertise, training and experience, there is a risk that those involved in mainstreaming will not thoroughly question gender issues. Instead, they might concentrate on gender stereotypes and distribution of traditional roles, thereby manifesting them. Additionally, it must again be emphasised that there is also a risk of gender mainstreaming to become a label rather than an active process. The intention to introduce gender mainstreaming does not mean that efforts to improve gender equality are automatically dispensable. Even more so, in many countries, representatives of women’s issues in institutions and authorities, dedicated women’s networks and other platforms have been created, while groups and individuals have been empowered, all to bring gender mainstreaming on its way. Dispensing them would mean to weaken women’s position once again under the disguise of gender equality motives.

■ Outlook

The previous pages have tried to capture a multitude of issues that are related to mobility and social cohesion. The train of thought that had provided the ‘red thread’ of these considerations proceeded as follows:

- 1) Mobility and transportation are prerequisites to participate in life through accessing urban and social functions and the thereby provided opportunities.
- 2) Social cohesion can only be achieved or maintained in a city if its citizens have a sense of mutual commitment, which is generated by the notion of equal access and participation.
- 3) Linking mobility and social cohesion implies that the ability of a population to live together in harmony is greatly influenced by access to urban and social functions.
- 4) Access to these functions is necessary for an individual and groups in order to achieve or maintain a certain quality of life, which is strongly, though not exclusively, determined by economic conditions.
- 5) Transport can be used as a means to combat poverty, yet only if the specific mobility needs of the poor are known, respected and adequately considered in transport planning.

- 6) Social exclusion, which widens the perspective on poverty by including other spheres than merely the economic one (e.g. participation in education, health care, social activities, politics, etc.), is likewise linked to mobility. Without adequate access, the multiple deprivations that the socially excluded are exposed to can be deteriorated. However, improved transport conditions can also increase their opportunities in life.
- 7) Among those individuals and groups most at risk to become impoverished and/or excluded, women still appear to be more vulnerable than men, which is due to their often unequal standing in life and their economical, cultural, societal and often also political disadvantaging.
- 8) Because of different roles men and women play in all spheres of life, their mobility patterns, and consequently, their transport demands are different, which has traditionally not been taken into account, and it is only recently that a more gender sensitive perspective has been applied, albeit progress is slow.
- 9) Gender mainstreaming is an important overall strategy that aims at better integrating half of the population's needs and wants into all domains of public life, including transportation. In order to achieve better results more quickly, women must participate sufficiently in all stages of the transport planning process, both as technical, managerial and planning professionals, and as 'lay' experts, which they are because of their everyday experience in transportation.
- 10) To close the circle, what remains now is a more in-depth analysis of the situation and dynamics, which in the paper at hand have been described in an overall comprehensive and sometimes somewhat general manner. This is the task also for the upcoming Toronto meeting.

By providing this paper, Commission 4 of the Metropolis Network has aimed at preparing the ground for the discussions in Toronto. The programme for the Commission's session has been drawn up in such a way that it addresses the very same issues that have been introduced here. With the help of the excellent expert speakers from the political and administrative level as well as from the pool of technical experts in the Metropolis cities and moreover, representatives from the Metropolis International Women Network on Local Government, the session aims at clearing the ground for further, more targeted actions within the Network and in each city individually.

In a first attempt to break the overall described subjects down to a more local level, an initiating survey has been carried out, attempting to find out to what extent social objectives are incorporated into the transport strategies of each city. The results of this survey are provided in Annex 1.

Following the Toronto meeting, a more detailed report will be produced, which will bring together the theoretical considerations of this paper with the results of the Toronto discussions and moreover, a second, more detailed analysis of the link between transport and social cohesion in selected Metropolis C4 cities. Additionally, further aspects that might not be contained in this paper will be included, if it turns out that there are developments of immediate relevance to one or indeed several of the cities, which have not been adequately addressed in the context of this paper.

Lastly, it remains to state that Metropolis is, and always will be, what its members make it. This also holds true for Commission 4. The authors would, therefore, like to thank the cities, which have supported the development of this paper by generously providing information, for example by means of the survey, and which continue to show interest in the work of Commission 4. They, thereby, acknowledge the importance of Urban Mobility Management for the present and the future of our cities

While certain social groups often show similar characteristics, e.g. in transport, they nevertheless are made up of individuals with heterogeneous, partly conflicting demands.

Gender issues formed the core of this paper, and it must again be stated that equality in mobility opportunities between men and women is nowhere near being achieved – a status that is deplorable and that will turn out to be an obstacle for further development of societies as a whole.

More insights into local conditions will be provided by the results of a survey, which can be found in Annex 1 of this paper, and of course, by the discussion to be followed in Toronto.

Commission 4 and the authors of this paper would finally like to thank the cities of the Network for their support in preparing this paper. Moreover, their continuing interest in the work of the Commission is highly valued.

Imprint

Metropolis Commission 4

Presidency Berlin:

Ingeborg Junge-Reyer
Senator for Urban Development, Berlin

Vice Presidency Seoul:

Myung-Bak Lee
Mayor, Seoul Metropolitan Government

Cities:

Barcelona, Belo Horizonte, Berlin, Brussels, Bucharest, Dakar, Esfahan, Hangzhou, Istanbul, Kinshasa, Manchester, Mashhad, Mexico, Moscow, Porto Alegre, Puebla de Zaragoza, Seoul, Sofia, Stockholm, Tehran

Berlin Working Group in the Senate Department for Urban Development:

Cornelia Poczka
Dr. Friedemann Kunst
Lutz Paproth
Eva Maria Forler

Metropolis:

Secretariat General
Ajuntament de Barcelona
Avinyó, 15 08002 Barcelona (Spain)
www.metropolis.org

For further information please contact the authors:

Dipl.-Ing. Diana Runge
diana.runge@ivp.tu-berlin.de

Dipl.-Ing. Hans-Joachim Becker
hans-joachim.becker@tu-berlin.de

TU Berlin, Department for Integrated Transport Planning
Salzufer 17 – 19, SG 4
10587 Berlin
Germany

www.verkehrsplanung.tu-berlin.de

Annex 1: Results of the Survey on Mobility and Social Cohesion

The following presents the results of the survey carried out on behalf of C4 in all member cities of the Metropolis network. Apart from seven thematic questions on mobility and social cohesion, the questionnaire also contained the request to provide statistical data on the transport system of the cities. The latter will be used to update and supplement the already existing data collection on transport in Metropolis cities, which will be published at a later stage. In the following, the answers to the thematic questions will be cited, thus presenting the current state of including social aspects and gender issues into transportation in the 14 cities that replied to the survey, out of which 11 provided information to the following seven questions on urban mobility and social cohesion.

Thematic questions of the survey

1. In how far do social objectives form part of your transport strategy? Are there certain social target groups for specific measures? Please, state briefly the extent and contents of related considerations.
2. Is the relation between transportation and reduction in poverty and/or social exclusion taken into account in your city's transport policy? The other way round, how far do you think does transport contribute to social cohesion in your city? Please, elaborate!
3. Are there any experiences as regards the involvement of specific social groups in the decision-making process and planning of transport?
4. Are you aware of different needs men and women have as regards transportation, and how far does this aspect have an impact on decision-making in the field of transport and the everyday business of dealing with transportation in your city?
5. Is Gender Mainstreaming incorporated in the decision-making process? Who is responsible, and what has been achieved so far?
6. Are there any special programmes that can be used to finance measures concerning social cohesion and transport (e.g. barrier-free access, low fare tickets, safety programmes, mobility education, demand-oriented services, etc.)? Please, state the source of funding and the approximate (annual) budget.
7. Are there any case studies, best practice or other interesting approaches regarding the contribution of transport to the achievement of social objectives, and especially gender equality, that may be of interest to other cities? Please, name them and give some brief account as well as contact details for more information!

Accra (Ghana)

1. The goal of the road transportation strategy specified in the Strategic Plan for the Greater Accra Metropolitan Area (GAMA) was "to rehabilitate, rationalize and improve the efficiency of the existing road network and to reduce the dominance of the centrally orientated movements system to a more efficient intra-city transportation system linking mayor employment and activity centres under a more decentralised land-use structure. Stronger emphasis is also given to improvement of the public transport system with the long term progressive development of a rapid mass transit system in the early part of the 21st century". In support of this goal the following objectives were defined: Develop an efficient road transport system; Improve mobility and access to urban and rural areas; Develop improved road transport facilities; Develop an integrated land use and transportation system; Develop an efficient public transport system; Provide for long-term transportation planning needs; Improve vehicle safety and performance; Develop an efficient and effective railway system; Provide for safe and convenient movements of pedestrians, cyclists and handicapped.

2. Certainly. The road transportation strategy component of the strategic plan observes that the overall thrust of the Structure Plan is to encourage more consolidated development through increased density, more intense redevelopment, infilling of vacant and under-utilised land and upgrading or alteration of existing dwellings to increase overall levels of occupancy. Developing and intensifying the land use pattern in this manner facilitates higher patronage and more efficient use of public transport. The transportation plan for GAMA was envisaged to form the basis for directing urban development. Early acquisition, demarcation and strict monitoring against encroachment of the road reserve required for the transport plan was seen as critical. Due to limited resources only the following priority areas were proposed for short and medium term action: Encroachment of major roads; Illegal access ways to high capacity roads or streets; Poorly designed and located bus and taxi stations; Closing of inappropriate retail activities on major roads.

3. Not really.

4. Yes we are. Passenger waiting times should be acceptable to users through provision of services at frequencies and capacities consistent with user needs. Waiting times observed from passenger interview surveys were between 15 and 19 minutes for "Trotro" and taxi users in GAMA, while significantly slower waiting times were observed in Sekondi-Takoradi. Waiting times for buses were substantially higher. The urban transport policy aims to reduce passenger waiting time through provision of high frequency, scheduled services along the core public transport network.

Current routes often terminate on the periphery of the Central Business District (CBD) forcing passengers to transfer to reach their destination. Approximately 40% of passengers make at least one interchange between public transport vehicles in order to reach their destination. This high rate of transfers causes delays and inconvenience for passengers. The design of the public transport system should serve the travel patterns of users and utilise planned interchanges to reduce the percentage of passengers requiring transfers. When route licensing contracts are being developed the route description should allow the route to continue through the CBD to terminate on the opposite side of the CBD to the start of the route. This reduces the need for passengers to transfer to a second vehicle, if their destination is on the other side of the CBD, and also reduces the need for large terminal facilities in dense downtown areas, which exacerbate the already congested nature of these areas.

The transport system should provide levels of comfort appropriate to the needs of different user groups. In particular shelters, seating and ablution facilities should be provided at terminals and interchanges. Shelters should be provided at bus stops.

Passenger convenience shall be facilitated by provision of passenger information regarding destination, routes, fares and timetables at transport terminals.

Passenger safety shall be improved through provision of lighting and security at major terminals.

5. Yes, gender mainstreaming is incorporated in the decision making process. However, unfortunately this is only up to the policy level. Implementation of the said policies are still yet to commence.

6. Not really.

7. Not really.

Amman (Jordan)

1. In serving un-served areas. In providing special service in this regard for the disabled. Through bus renting companies that serve private school students, private university students, industry workers and pilgrims.

2. Yes, through providing transport network conducive to free movement for various social groups, with suitable transport fees.

3. Yes, through Public Transport Regulating Commission (PTRC).

4. Yes, through measurement surveying studies regarding level of satisfaction of those who use transport service in accordance with their income and gender.

5. We are in the process of achieving this issue.

6. We are in the process of tackling this issue.

7. Not yet implemented.

Antanarivo (Madagascar)

1. Social objectives are being considered, e.g. with regard to maintaining a common transport tariff for urban travellers of 200 Ariary (about 0.10 US\$ or 0.07€). Specific target groups also benefit from lower fares, such as students and the elderly.

2. The relation between transport and poverty reduction and/or social exclusion is supposed to be integrated into transport planning (based on differences in purchasing power of the travellers). In turn, transport does contribute to social cohesion in our city, and we attempt to keep the low transport fares, which in fact are the lowest worldwide and they are moreover unique in that they apply to all zones and areas in the urban community of Antanarivo.

3. Yes, we do have experiences with participating different social groups as well as individual transport providers and existing transport co-operations

4. The Community of Antanarivo (CUA) is well aware of the different needs and has attempted to take them into account. However, the success of these efforts cannot be guaranteed in cases where transport operators carry out measures themselves and the CUA only oversees the matters. Those who fulfil transport quality requirements are widely accepted, yet what goes beyond that still poses problems. Gender issues have no impact on decision making.

5. Responsibility for a transport or other company is taken over by the president of the company or the co-operation, who can be either a man or a woman depending on administrative requirements or those of the travellers. Therefore, gender mainstreaming is not incorporated into decision making.

6. At the moment no specific programmes regarding social cohesion and transport exist, which would allow for financing according to social objectives.

7. There are no studies on the contribution of transport for achieving social objectives.

Barcelona (Spain)

1. In general, the relation between tariff revenues and operational costs of public transport in the metropolitan region of Barcelona is about 50%. This number in itself shows that public transport is a means to integrate less affluent groups. Moreover, there are discounts for the elderly and pensioners, which differ between the individual communities. Young people under age 23 may also use a three-month-discount ticket, which offers free access to all transport means.
2. Apart from what has been said in the previous answer to question 1, it is important to emphasise that for the planning and construction of new infrastructure an assessment method is used, which is based on the analysis of various factors. One of the priority criteria includes projects in areas of low-income or with hitherto poor accessibility.
3. Within the metropolitan transport authority there used to be a commission responsible for users and beneficiaries of public transport (Comision de Usuarios y Beneficiarios del transporte publico). Recently, this committee has been replaced by the Mobility Council (Consejo de Movilidad), in which various societal groups are represented, such as neighbourhood co-operations, professional associations, unions and other organisations. This Council has been constituted on the occasion of the realisation of the Master Plan Mobility (Plan Director de Movilidad), which is currently being developed. Moreover, it has now been decided that the Council will continue to exist beyond the approval procedure of the plan.
4. There is no differentiation in public or private transport, which would relate to gender criteria.
5. No, not at all.
6. At present, the metro network is adapted to the needs of persons with disabilities. This requires that in every station lifts from the street to the entrance hall and from there to the platform are being built. It has been estimated that the implementation of this measure will cost approximately 2 Mio. € per station. The implementation works are supposed to be finished within three years. Platforms and moving material [trains] have already nearly entirely been adapted. Likewise, 80% of the bus fleet have been modified to suit the disabled, and about 3 Mio. € annually have been made available for the purchasing of barrier free buses.
7. There are none ready for publishing. Only in few cases the share of users is known, who require an elevator: people with wheelchairs, prams, heavy luggage or bicycles.

Hanoi (Vietnam)

1. i) Social objectives are considered in relation to the following transport strategies: Reduction of accidents, Transport reduction; Sophisticating and setting up transport participation; Services for all groups (esp. school and university students, disabled and older people); Reduction of the distance between city centre and suburbs; Prioritisation of developments in poorer parts of the country.
ii) Targeted measures for specific groups in Hanoi include: Ticket and tariff reductions for collective transport for pupils, students, disabled and invalid people.
iii) Improvement of transportation in neighbouring and poor regions is done by the city through public subsidisation of fares for buses [in these areas].
2. The city of Hanoi has development plans for public transport in poorer districts for the period 2005 to 2010. These include road construction also for smaller roads in order to achieve the following aims: Improving the quality of life for the inhabitants; Increasing economic and commercial exchange; Attract investments in infrastructure in order to create employment.
3. No, we have no experience with participating specific social groups in the decision making process or in transport planning. We just publish plans and strategies for the inhabitants.

4. We do not take into account the different needs of men and women.
5. No.
6. We have implemented public transport projects that have been financed by the EU, Japan, France, Germany, ...
7. No.

Kinshasa (Democratic Republic of the Congo)

... only replied to statistical questions.

Mashhad (Iran)

1. Based on comprehensive studies carried out on transportation in the city of Mashhad, the objectives include: Suitable culture of transportation; Improvement of transportation services; Protecting the environment, and physical and mental health of people; Easy access to facilities in the city; Reduction of living expenses; Improvement of existing transportation system efficiency. Each of these objectives have a social dimension, therefore the needs of all different social groups related to daily trips into the city have been considered in Mashhad transportation strategies.
2. Yes. Subsidies have been allocated to public transportation, so the users only pay 1/3 of actual costs and the municipality and central government are responsible for the rest. Furthermore, the transportation services are part of inexpensive items of families' daily expenses and most people can also afford to use taxis. The taxi fee is also subsidized by the government.
3. Yes. In most of the studies, which resulted in comprehensive or detailed transportation planning, the opinions of three groups are collected and considered in decision making: city transportation authorities; transportation and traffic experts, users of public transportation systems. After implementing traffic and transportation plans, their appropriate and inappropriate impacts will be measured through a survey. In comprehensive studies on transportation in the city of Mashhad, measurement of traffic on certain days in the city and the study of secure travel limit are used through gathering of views of different groups of society. Furthermore, there are different decision making councils which are involved in planning and decision - making: a) Traffic coordination Council of Khorasan Razavi. b) Technical Council of Traffic Organization. c) Council of Reduction Travel Demand of Mashhad. The members of these councils are from public institutions, private institutions, and the police. These are our experiences of involving different groups of society in traffic planning and decision making.
4. In general, daily travels are determined according to gender, purpose of travel, the traveller's job, and the time of travel. The results will be used in short term, long term or midterm planning; especially for meeting the transportation needs of people. We can divide bus interior spaces into two parts, one for men and one for women. We also have special taxis for women.
5. Yes. As mentioned in question 3 and question 4, views and suggestions on scientific and statistical methods are collected, which depend on specifications of the statistical society being studied. A sample population consisting of women and men is chosen for a survey. Applying the proposed plans in Mashhad Municipality enables all groups of society to be involved in the decision making process.
6. Yes, to use public transportation some facilities have been considered so that 1/3 of the service price is received from users of the system, and municipality and the government provide the rest (2/3) of it. Most offices and institutions - public or private companies - provide free transportation services for their employees to get to work; thus, promoting the culture of carpooling. Regarding education, because of the limitation of the financial resources, educational programs have been prepared and broadcasted from mass media. Also, expert groups go to schools and kindergartens to teach traffic rules. The city is going to create a traffic park in the future.
7. One of the detailed studies for Mashhad is designing an integrated public transportation system which is defined according to the public network, providing suitable opportunities for all the citizens in different parts of the city.

Dividing buses into two parts (women and men) and entering special taxis for women into the public transportation system are good approaches in the use of the public transport system. This division is based on the amount of daily trips by each gender.

Estado de Mexico (Mexico)

1. It is considered that transportation modes must be accessible for all members of the population, and especially that tariffs must comply with the majority of the population. In addition to that, it is envisaged to give public transport priority over motorised individual transport. The political concept also includes measures to support pedestrians.
2. It is envisaged to develop mass transport by extending and making use of bus corridors, which are cheaper than underground or railway systems. Also, if investments decrease, the funds thus saved can be invested in other projects with social impacts. Moreover, another aspect plays an important role: The integration of existing transport providers into new mass transport systems will result in a legalisation of jobs that are currently not properly registered. If however they are properly recorded, the employees will profit from the social benefits, to which every employee is legally entitled.
3. Apart from existing neighbourhood associations, the government of the federal state decided to establish councils for the integration of people's representatives, which are called COINCIDES (Consejos de Integración Ciudadana para el Desarrollo Social). It is the task of these Councils to enhance the dialogue between as well as the co-operation and the integration of different social groups in all areas of social development, including transportation, which are implemented by the executive powers.
4. Currently, gender differences are not considered in public transport.
5. Gender Mainstreaming is not a part of the decision making process.
6. There are no financial sources that support measures of social cohesion in the transport sector. At the moment, this kind of financing is carried out by the GEF (Global Environment Fund).
7. No.

Puebla de Zaragoza (Mexico)

1. The legal framework of Puebla state leaves only little scope for the urban government to act with regard to transportation. Nevertheless, within the framework of its responsibility for the urban development plan the administration has given high priority to the improvement of the transport system in order to support urban mobility. In the case of Puebla the lower classes of the population are the main users of public transport and therefore it is the low-income population, which will benefit most from the intended measures.
2. First, a tendering procedure for a feasibility study for the implementation of a pilot corridor for the integrated transport system of the type BRT (Bus Rapid Transit) will be executed, which later on will be implemented.
3. It is envisaged to integrate urban transport policy with sustainable urban planning. With such a focus the quality of life of the population will be improved and particularly the weaker population groups will benefit. We believe that shortening travel times and improving the quality of public transport will result in a better social integration. In planning the BRT routes we attempt to connect individual urban districts and settlements with other attractive centres as well as employment centres. Neighbourhood relations are supposed to be strengthened by means of improving the image of urban areas, strengthening local district centres and revitalising public space.
4. The Integrated Transport System Project ((Sistema Integrado de Transporte SITP) is being decided by the Council for Public Participation (Consejo de Participación Ciudadana) and the Advisory Council for Traffic and Transportation (Consejo Consultivo de Vialidad y Transporte). These are

urban bodies and it is assumed that they are representative organisations of the inhabitants, the workers, the transport companies, the chambers, etc. Furthermore, we have initiated the integration of a Department of Transport Management (Unidad de Gestión del Transporte UGTP), which is functionally related to the Advisory Council for Traffic and Transportation, in order to ensure the involvement of the city in the planning and organisation process.

5. Yes, the urban administration is well aware of the question of gender equality and the consequences of an insufficient mobility system for women because of the dual role (work and family) they take on as well as from an institutional and programmatic perspective. SITP attaches great importance to the participation of women. Additionally, the formulation of strategies and measures should also address impacts, which have an effect on the equality of deprived groups.
6. The project leader of SITP is Ms. Lic Ishi Espinosa Tiburcio, Directora de Innovación Gubernamental.
7. As already mentioned Puebla is currently in the phase of commissioning the feasibility study for the pilot corridor for the SITP however the suggested measures are included in the project. Financial budgets have been made available by the Municipal Government and by the National Development Bank (Banca de Fomento Nacional) in relation with BANOBRAS (Mexican Public Works Bank) and the Infrastructure Financing Fund FINFRA (Fondo de financiamiento para la infraestructura). Additionally, the project has been found eligible by the World Bank for funding by GEF (Global Environment Facility), and it is exactly this type of measure which is included on project level for GEF funding.
8. There are no good examples in our city yet, instead we are currently analysing other cities (Bogota, Colombia de Leon, Mexico).

Moscow (Russia)

The questions 1-7 are political questions, which should be addressed to the Transport Ministry of the Russian Federation and the Transport Ministry of the City of Moscow.

Niamey (Niger)

1. The overall strategy for urban transport is entirely guided by social objectives, e.g. mini buses on certain routes and buses, which connect the city with the surrounding villages. For Sotruni, the urban transport company in Niamey, transport scheduling for public transport is usually done in compliance with peak travel times of people working in administration, education or other sectors, and for commercial transport, such as rubbish collection, traders, craftsmen, in off-peak hours.
2. The connection between transport and poverty is addressed in such a way that there are special tariffs for the less affluent also for social activities. Because of this, travelling for family visits, christenings, weddings and other gatherings are made easier. These trips also contribute to social cohesion.
Bus Sotruni: for the less affluent
Mini-Bus: airport connections, transport for peripheral districts
Taxis: independent, modern, urban transport
3. The urban administration meets with different technical bodies, district leaders, representatives of organisations, the presidencies of unions, ONG and associations for urban transport policy and planning. Additionally, a number of surveys have been carried out by Sotruni in order to settle on routings, tariffs and schedules of public transport.
4. In Niger, men hold the majority of administrative responsibilities and are employed in the various companies, while in general women take over the private household and smaller businesses. Differences in transport needs mainly arise from the different times of the day, during which their respective activities take place.
5. At Sotruni, gender aspects are considered regarding the employment of women as cashiers, ticket inspectors, office staff or drivers at certain times.
6. not stated

7. not stated

Porto Alegre (Brazil)

1. The policy of Porto Alegre's Public Transport and Circulation Company (Empresa Pública de Transporte e Circulação, EPTC) gives priority to pedestrians and public transport and contributes to development and democratisation. Systematic efforts are underway to achieve the aim of building up a healthy, cohesive and democratic city. Objectives include achieving a high quality of public transport servicing as well as road transport for all inhabitants of the city in order to guarantee the right of mobility. Further objectives are: democratic management of transport systems, enhancement of the democratisation of working relations in the transport sector, democratisation of the use of public space as an element of cohesive development of the society, harmonisation of transport policy with economic development in order to maintain the quality of life; enhancement of the decentralisation of the city, reduction of the need for physical movements.
2. Yes. It is the aim of EPTC to put in systematic efforts in order to prioritise pedestrians and public transport and to plan a healthy, cohesive and democratic city. The improvement of the quality of public transport (which is often used by (rural) people with low incomes) contributes to the improvement of the quality of life of public transport users.
3. The EPTC has communication technologies, such as the internet, telephones (118), at its disposal, as well as its central office, all of which can be exploited by users to participate by bringing in their suggestions and wishes. Likewise, users can directly contact the Regional Headquarters (CARS) or the community administrations.
4. Yes. However, currently decisions made in the transport sector do not consider the differences between men and women. Therefore it is necessary to carry out surveys in order to find out about general requirements.
5. Currently decisions made in the transport sector do not consider the differences between men and women. Therefore it is necessary to carry out surveys in order to find out about general requirements.
6. See table.

Denominación	Recursos	R\$ TOTAL	Situación
Terminal Belém Velho	BNDES	350,930	Aprovado financiamento
Plano Diretor Cicloviário para o Município de Porto Alegre		250,000	Licitación
Reforma do pavimento dos corredores de ônibus da João Pessoa e Bento Gonçalves	BNDES	3,530,556	Aguardando retorno
Reforma de terminais e estações de corredores de TCU	BNDES	485,000	Aguardando retorno
Qualificação dos Sistemas de Corredores de Transporte Coletivo Urbano	BNDES	250,000	Aguardando retorno
Transporte sustentável e qualidade de ar	GEF	4,950,000	Aguardando retorno

7. **Special corridors for public mass transportation:** There are special corridors for public mass transportation. The most noteworthy element of the transport system are exclusive corridors for mass transit, which have been introduced in the 1970s and which take up the historic transport connections. The corridors led to an increase in transport speed and the improvement of conditions for outward and inward journeys. On the other hand, the corridors lend a tendency of radial-monocentric organisation to the transport system. This results in a inappropriate centralisation of the transport system and consequently to enormous pressure on the historical centre. In this regard, the sectoral plan for mass transportation (PDSTC) highlights the imbalanced relation between demand and supply in the city centre: While 78% of bus lines end in the centre, only 26% of the passengers ride to these final stops. The imbalance between demand and supply became obvious

when at the final stops only 50% of the buses' capacities were utilised.

Microbuses (Lotacao): The microbus service was enacted in 1977 as a law in order to close the gap between conventional public transport and individual transport and to provide service for trips into the city centre and the surroundings. Each microbus has a seating capacity of 21; standing is prohibited. The fares for the microbus are collected by the drivers. The minibuses offer a service, which is different from that of urban buses. The bus stops are located outside the main transport routes, and they are not fixed. All buses are equipped with air conditioning. The minibus system offers easy accessibility within, of and to the different districts and services some places, which are not connected at all to regular bus service. Most users belong to higher income groups and the middle class. The Service is organised and administered by SMT and EPTC, who professionally manage the authorisation and permission and regulate the number of individual transport providers.

Bus fleet: For mass transit, conventional vehicles, i.e. articulated buses of the Padron type, are used. On direct and express lines 338 Padron buses with air conditioning are in service. 112 low-floor buses operate on three transverse connections and one direct line, which mainly provides for university students. They are maintained by PUCRS and UFRGS. Additionally, there are a few articulated buses, that operate along transverse and partly radial routes.

Seoul (Korea)

1. Today, Seoul's transportation policies are designed to establish human-oriented transport systems. To this end, the city government has made efforts to shift passenger car-oriented transport policy to a public transport-oriented one and to guarantee the right of mobility to all including the handicapped, the elderly, children, and low-incomeers so that they can use public transport conveniently. With the premise that it is essential for social cohesion to ensure the right of mobility of the group of social exclusion including the handicapped and the elderly, the city government is implementing various policies. Those include a fare-free system for the elderly of 65 years old and above, barrier-free access for the handicapped such as directional blocks, elevators, finger readings for the blind at subway stations, low-floor buses, taxi services, and a free transfer system between the modes of public transport.
2. The city government designs its transport policies under the premise that everyone's right-of-way should be ensured in order to enable him/her to participate in social/economic activities and that one should not be treated differently because of his/her social status or means of transport. To this end, the city government has expanded/improved facilities for barrier-free access to public transport by the handicapped, installed elevators at subway stations, introduced low-floor buses, and operated taxi services for them. In addition, the city government has provided the elderly with travelling allowances and institutionalized their fare-free use of subways based on the article 26 of the Act on Welfare for the Aged. As of July 1, 2004, with an aim to reduce the use of passenger cars and increase ridership of public transport, the city government implemented an overall reform on its transportation, introducing BRT systems such as median bus-only lanes. Such efforts have contributed to energy conservation, environmental protection, reduction in traffic costs, and improvements in social equity. In particular, the scope of free transfers between public transportation has been expanded so that much more people can benefit from the free transfers than before. Previously, transfer-free system was for subways only. As a result, the beneficiaries from free transfers were restricted to the residents living near subway station who were relatively affluent. However, the newly designed transport system, through free transfer between modes of transport, allows relatively less abundant residents in the suburban areas to benefit from free transfers. Consequently, it has contributed to mitigate social exclusion triggered by the difference in the means of transport and the gap between rich and poor.
3. When developing and implementing policies in the field of transportation and others, experts groups including associate research institutes of the Seoul Metropolitan Government

(SMG) and civil society groups participate in the process of decision-making and monitoring. To give an example, the city government has formulated an Action Plan for the public transport reform in cooperation with transport experts from SDI, academics, and other organizations since the first stage of bus reform as early as August 2002. The reform of Seoul's bus service lines and operation management faced strong opposition from bus companies and citizens of interest and its implementation was almost baffled. At that time, Seoul Metropolitan Government launched the Citizen's Committee for Bus System Reform (BSRCC), as seven civic groups including Korean Economic Association asked SMG to establish an organization including participation of citizens, arguing that the bus reform is a very urgent project. The members of the Citizen's Committee for Bus System Reform (BSRCC) consisted of civic groups, transportation experts and other stakeholders. BSRCC has contributed to the success of Seoul's public transportation reform by establishing a procedure of social consensus on the bus system reform and mediating the conflicts of interest among stakeholders. Until now, the committee has been holding meetings once or twice a month to monitor new developments, address conflict of interest and suggest policy alternatives.

4. Since the 4th World Conference on Women held in Beijing, 1995, Gender Mainstreaming has become a new paradigm in developing women-related policies. Accordingly, the scope and content of SMG's policy on women, previously focusing on women's issues only, has changed to include gender equality. It is Women Policy Division, SMG, that deals with gender mainstreaming issues. Up to now, 'Evaluation of policy influence on gender' and 'Education of public officials on gender equality' are the most important works done by the city government in order to realize gender mainstreaming. Evaluation of policy influence on gender' is designed to develop and execute policy on gender equality by analyzing and evaluating the effect of policy implementation on women's right and their participation in social activities beforehand. To this end, the city government carried out 'Research for building a basis for gender-sensitive public administration' and 'Evaluation of the effects of the city government's alternative education project on gender' in 2003, for the first time as a local government. Consequently, it implemented gender influence evaluation on health and welfare policies in 2004, cultural policies in 2005. In 2006, the city government plans to execute gender influence evaluation on 5 projects including management of rehabilitation facilities and career development center for the handicapped. On the other hand, the city government has carried out 'Education of public officials on gender equality' continuously and increased the number of trainees from 129 in 2002 to 482 in 2005 so that it can build the basis for gender-sensitive public administration. In addition, the city government has made efforts to facilitate women's participation in the process of decision-making on important policy issues. For example, the percentage of women working at various city councils has increased from 33.5% in 2002 to 35.1% in 2005. And the percentage of senior female officers at the city government (Level 5 and above) has also jumped from 8.35% in 2002 to 9.65% in 2005.
5. The representative policies that the city government has been implementing for social cohesion include taxi services for the handicapped, introduction of low-floor buses, and installation of directional blocks and elevators at subway stations. More precisely, based on the article 14 of the regulation on barrier-free access for the transportation poor, the city government has already introduced 141 low-floor buses for the transportation poor such as the handicapped. In 2006, 194 vehicles will be additionally introduced and put into operation. (2006 annual budget of 19.4 billion won secured). As a part of project for improving accessibility to transportation facilities, which is based on the Act on welfare of disabled persons, the city government has replaced stairways with elevators or escalators at many subway stations at a cost of tens of billion won. Adding to that, the city government has supported the operation of driving schools for the disabled and provided them with driving instructions for getting their driver's license for free based on policy on social welfare for the disabled, one of the city government regulations. Besides, based on the article 26 of the Act on welfare for the aged, the city government has provided 725 thousand people of 65 years and above with travelling allowance of 56.3 billion won in total and offered fare-free use

of subways for 184 thousand of them. Note: Based on the article 66, Act on the Honourable Treatment and Support of Persons, etc. of Distinguished Services to the State, those who performed distinguished services to nation benefit from free use of city transit operated by Seoul Metro and Seoul Metropolitan Rapid Transit Corporation. (8,244 persons in 2005, total cost: 7,231 million won)

6. **DIALOGUE-ORIENTED DECISION MAKING** : Influence on Bus Users, Politicians and Experts in Seoul's Public Transit Reform

Background:

Since 1990, Seoul's bus industry had been trapped in a vicious cycle of decreasing ridership, bankruptcy of major bus operators and worsened service quality, increase in government subsidy and fares. Bus routes became circuitous to cover as many areas as possible. As a result, bus services in Seoul became degraded. Operators and drivers no longer saw any promises in their industry and the city government had agonized over the ever-increasing subsidy for the industry. Against this backdrop, Seoul Metropolitan Government (SMG) took a bold step to overhaul the city's bus system on July 1st 2004.

Bus System Reform:

- 1) Introduction of "quasi public system" concept to bus operations: SMG adopted new advanced profit-oriented management schemes and techniques while ensuring the public nature of bus operations. The city government redesigned the bus routes while guaranteeing a reasonable level of revenues to bus companies in accordance with their operation performance.

- 2) Reorganization of bus service lines: The circuitous bus routes have been reorganized into trunk and feeder lines. Trunk lines serve as the major traffic artery while feeder lines link to trunk line bus stops/subway stations with easy transfer. For this matter, buses are reclassified into four types of buses, Red, Blue, Green and Yellow.

- 3) A unified fare system and scientific management: SMG developed T-Money system, a smart card system, whose cards can be used both for buses and subways. Passengers pay fares based on travel distance. Operations of bus companies are controlled by newly established Bus Management System (BMS) and data from the new smart card system. The new systems enabled the city to add flexibility to meet the needs of bus users.

- 4) Traffic Infrastructure Rebuilding: SMG extended axial bus-priority lanes in order to improve the speed and punctuality of bus services and mitigate traffic congestion on other roads. The city government also extended curbside bus lanes and improved signs and shelters at bus stops. New public bus terminals and transfer centers were also established for passenger convenience.

Reform and role of stakeholders:

- **Conflict of interests:** Reforming the bus system of a big city like Seoul was about changing people's life pattern overnight and affected the interest of bus industry directly. Therefore, the plan received mixed responses from stakeholders. SMG and transportation experts hailed the plan. However, labor unions in bus industry were vehemently opposed to the reform out of fear of massive layoffs. It was also the case with bus companies operating on profitable routes. Citizens' opinions were also divided. People using public transportation supported the plan while those who drive passenger cars were sceptical.
- **Public consensus:** As a result of the continued conversations and consultations between Seoul Metropolitan Government and the bus industry, the Mayor of Seoul and representatives of the bus industry reached an agreement on the bus system reform. The agreement paved the way to put bus route management under public control and adopt a quasi-public concept. In the process, the Citizen's Committee for Bus System Reform (BSRCC), led by Non-Governmental Organizations and experts, played the role of a mediator between the city government, the bus industry, labor unions, politicians and citizens.
- **Roles of Each Stakeholder**
 - **Mayor's Leadership:** The Mayor of Seoul pushed ahead with the bus reform, letting transportation experts from the private sector take the lead. Despite

opposition from the bus industry, unionists and some citizens, he went ahead with the reform with great leadership and discipline.

- **Participation of experts:** The Assistant Mayor for Transportation, who himself was an expert of transportation, formed a think-tank, a Mass Transit Research Center, to conduct research and come up with action plans of the reform. The think-tank devised effective policy alternatives and secured support from private expert groups including the Korean Society of Transportation.
- **Bus industry and labor unions:** The reform of Seoul's bus service lines and operation management faced strong opposition from bus companies and unionists. SMG initiated continuous consultation and arbitration. As a result, SMG secured the right to rearrange bus routes and the bus companies got a guarantee for proper revenue. Labor unions also agreed to the reform expecting improvement in working environment and welfare with the reform. In the process, BSRCC led mediation between SMG and bus industry.
- **Reflecting the voices of city council, civic groups and bus users:** As the reform plan included extension of axial bus-priority lane, concerned voices rose from passenger car drivers, merchants around bus stops and citizens opposing the change. However, civic groups working on transportation issues welcomed the reform. Backed up by their support, SMG could mitigate opposition.
- **Citizen's Committee for Bus System Reform(BSRCC):** SMG launched the committee, as civic groups demanded SMG to establish an organization that participated the citizens. The members consisted of civic groups, transportation experts and other stakeholders. The committee had meetings every other week to monitor new developments, address conflicts of interests and suggest policy alternatives. They held several public hearings, consulted with relevant organizations and convinced bus industry in order to build a public consensus on bus reform.

Lessons:

A) Strong leadership of Mayor: The Mayor of Seoul had more to lose than gain in pursuing bus reform. Ordinary citizens and interest groups were sceptical about the plan because of short-term inconveniences and disadvantages that the reform would bring about, even though they agreed on the direction and necessity of it. Against this backdrop, Mayor of Seoul, as top policy maker, exerted strong leadership to go through the opposition thereby greatly contributing to the success of the reform.

B) Role of BSRCC as new kind of urban governance system: Seoul's bus reform was not pursued by top-down method. Instead, all relevant parties took part in the reform and carried out a full consultation through BSRCC. The committee, jointly launched by the public and private sector, was a dialogue oriented decision-making organization, which opened a new chapter in urban governance system.

C) User convenience and rational management built on IT progress: Korea's advanced IT enabled the city to introduce a smart card system that charges fares in accordance with travel distance. T-Money card not only improved user convenience offering a wide variety of services, but also promotes transparency in revenues and expenditure of bus companies. Thanks to the smart card system, the city could boost transparency and reliability in joint management of the revenue pool, the calculation of the cost of bus operations and budget allocations for the bus industry.

7. not stated

Teheran (Iran)

... only replied to statistical questions

Annex 2: Endnotes

- ¹ UNESCO (publ.) (2004): Mobility and Social Cohesion. Concise Accounts of Proceedings of the International Conference held in Paris 5 and 6 May 2004. Paris.
- ² Becker, Hans-Joachim; Runge, Diana (2005): Safeguarding Mobility – Transforming Transportation. A study carried out on behalf of Commission 4 ‘Urban Mobility Management’ of the Metropolis Network (publ.) in preparation of the 8th World Congress of Metropolis in Berlin, May 2005. Barcelona, Berlin.
- ³ Metropolis Commission 4 (publ.) (2005): Declaration on Sustainable Urban Mobility Management. Joint Declaration of the C4 Member Cities, adopted at the 8th Congress of the World Association of the Major Metropolises, Metropolis, in Berlin 11-15 May 2005. Berlin.
- ⁴ UNESCO (publ.) (2004): I.c.
- ⁵ Mackensen, Rainer (1975), cited following Breßler, Christian; Harsche, Martin (1998): *Skript zur Einführung in die Kultur- und Sozialgeographie. Geographisches Institut der Humboldt Universität zu Berlin*. [http://userpage.fu-berlin.de/~bressler/geoskript/_index.htm 20.08.2004].
- ⁶ Maxwell, Judith (2003): *What is Social Cohesion, and Why Do We Care?* Article prepared for the board of Trade of Metropolitan Montreal publication Trend Chart. [<http://www.cprn.com/en/doc/cfm?doc=210#> [as of: 27.02.06]]
- ⁷ Senate of Canada, Standing Committee on Social Affairs, Science and Technology (1999): Final Report on Social Cohesion. Ottawa, Ontario
- ⁸ Kennedy, Lori G. (2004): Transport and Social Exclusion – A United States View. In: FIA-Foundation (publ.) (2004): Transport & Social Exclusion. A survey of the Group of Seven nations. London: page n.s.
- ⁹ Lucas, Karen; Grosvenor, Tim; Simpson, Roona (2001): Transport, the environment and social exclusion. Layerthorpe, York.
- ¹⁰ Maxwell, Simon (1999): The Meaning and Measurement of Poverty. In: Overseas Development Institute ODI (publ.): Poverty Briefing No. 3. [<http://www.odi.org.uk/publications/briefing/pov3.html>. 26.04.2006]
- ¹¹ *ibid.*
- ¹² Böhnke, Petra (2001): Nothing Left to Lose? Poverty and Social Exclusion in Comparison – Empirical Evidence on Germany. Berlin.
- ¹³ Social Exclusion Unit (2001): Preventing Social Exclusion. London.
- ¹⁴ The International Bank for Reconstruction and Development; The World Bank (publ.) (2002): Cities on the Move – A World Bank Urban Transport Strategy Review. Washington D.C.
- ¹⁵ *ibid.*
- ¹⁶ *Ibid.*
- ¹⁷ The World Bank (publ.) (1996): Sustainable Transport – Priorities for Policy Reform. Washington.
- ¹⁸ Gannon, Colin; Liu, Zhi (1997): Poverty and Transport. World Bank TWU-23 Discussion Paper. Washington D.C.
- ¹⁹ The World Bank (publ.) (1996): I.c.
- ²⁰ World Business Council for Sustainable Development WBCSD (2001): Mobility 2001 – World mobility at the end of the twentieth century and its sustainability. Conches-Geneva.
- ²¹ Gannon, Colin; Liu, Zhi (1997): I.c.
- ²² Runge, Diana (2006): Wer nicht fährt, der nicht gewinnt? In: *mobilogisch!* 1/06. Berlin: 28-30.
- ²³ Wixey et al. (2005): I.c.
- ²⁴ Kenyon, Susan; Lyons, Glenn; Rafferty, Jackie (2002) ‘Transport and Social Exclusion: Investigating the Possibility of Promoting Inclusion through Virtual Mobility’. *Journal of Transport Geography*, Vol. 10. Manchester / Knoxville TN: 207-209.
- ²⁵ Department for Transport (publ.) (2000): Social Exclusion and the Provision of Public Transport. Main Report. London.
- ²⁶ MATISSE Consortium (2003): MATISSE Interim Report. Prepared for the DG Employment and Social Affairs of the European Union.
- ²⁷ *ibid.*

- ²⁸ Social Exclusion Unit (2003): Making the Connections: Final Report on Transport and Social Exclusion. London.
- ²⁹ Church, Andrew; Frost, Martin; Sullivan, K. (2000): Transport and social exclusion in London. In: Transport Policy 7:195-205.
- ³⁰ Gannon, Colin; Liu, Zhi (1997): I.c.
- ³¹ Church, Andrew; Frost, Martin; Sullivan, K. (2000): I.c.
- ³² Social Exclusion Unit (2003): I.c.
- ³³ Deutsche Gesellschaft für Technische Zusammenarbeit GTZ GmbH (publ.) (2002): Urban Transport and Poverty in Developing Cities. Eschborn.
- ³⁴ Deutsches Institut für Wirtschaftsforschung; Institut für angewandte Sozialwissenschaft GmbH (2004): Mobilität in Deutschland. i.A. des Bundesministerium für Verkehr, Bau- und Wohnungswesen. Berlin.
- ³⁵ Cass, Noel; Shove, Elisabeth; Urry, John (2005): Social exclusion, mobility and access. In: The Sociological Review, Volume 53, Number 3, August 2005: 539-555.
- ³⁶ Whitelegg, John; Williams, Nick (2000): Non-motorized transport and sustainable development: Evidence from Calcutta. In: Local Environment 5(1): 7-18.
- ³⁷ Deutsche Gesellschaft für Technische Zusammenarbeit GTZ GmbH (publ.) (2002): I.c.
- ³⁸ Grieco, Margaret; Raje, Fione (2004): Stranded mobility and the marginalisation of low income communities: an analysis of public service failure in the British public transport sector. Paper presented at the conference on Urban Vulnerability and Network Failure, University of Salford, 29/30 April 2004. [www.geocities.com/transport_and_society/networkfailure.html 10/04/06]
- ³⁹ Booth, David; Hamner, Lucia; Lovell, Elisabeth (2000): Poverty and Transport. A report prepared for the World Bank in collaboration with DFID. Final Report. London.
- ⁴⁰ National Women's Council of Ireland (publ.) (2001): First Hand Experience – Second Hand Life. Women and Poverty. Dublin.
- ⁴¹ BRIDGE development – gender / Institute of Development Studies (publ.) (2001): Briefing paper on the 'feminisation of poverty'. Prepared for the Swedish International Development Cooperation Agency. Brighton UK.
- ⁴² Hamilton, Kerry (2001): Gender and Transport in Developed Countries. Background Paper commissioned by the UNED Forum as input for the expert workshop "Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making, Berlin, Germany, 10-12 January 2001. London.
- ⁴³ Ibid.
- ⁴⁴ Peters, Deike (2001): Gender and Transport in Less Developed Countries: A Background Paper in preparation for CSD-9. Paper commissioned by the UNED Forum as input for the expert workshop "Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making, Berlin, Germany, 10-12 January 2001. London
- ⁴⁵ Ibid.
- ⁴⁶ Filton College (n.d.): <http://www.adamranson.freemove.co.uk/critical%20concepts.htm>
- ⁴⁷ Websdale, Neil (1998): Rural Woman Battering and the Justice System – An Ethnography. Thousand Oaks, CA.
- ⁴⁸ Hamilton, Kerry (2001): I.c.
- ⁴⁹ Statistisches Bundesamt (publ.) (2004): Alltag in Deutschland – Analysen zur Zeitverwendung. Forum der Bundesstatistik Band 43. Wiesbaden.
- ⁵⁰ Hamilton, Kerry (2001): I.c.
- ⁵¹ Ibid. Quoting Kelly, L. (1999): Violence against women: a policy of neglect or a neglect of policy? In Walby, S. (ed.) New Agendas for Women. London.
- ⁵² Peters, Deike (2001): I.c.
- ⁵³ National Statistics Online (2004): Focus on Gender. London. <http://www.statistics.gov.uk/STATBASE/Product.asp?vlnk=10923>. 13.04.06]
- ⁵⁴ McGuckin, Nancy; Murakami, Elaine (1999): Examining Trip-Chaining Behaviour. A Comparison of Travel by Men and Women. Washington D.C. (Analysing data from the 1995 US Nationwide Personal Transportation Survey).
- ⁵⁵ Hamilton, Kerry (2001): I.c. (quoting DETR (1998): Focus on Personal Travel. London.)
- ⁵⁶ Department for Transport (publ.) (2000): Public transport gender audit evidence base. London.

- ⁵⁷ Bianco, Martha; Lawson, Catherine (1996): Trip-Chaining, Childcare and Personal Safety: Critical issues in Women's Travel Behavior. In: U.S. Department of Transportation (publ.): Women's Travel Issues. Proceedings from the Second International Conference. Washington D.C.
- ⁵⁸ *ibid.* (quoting numerous studies from the United States)
- ⁵⁹ World Business Council for Sustainable Development WBCSD (2001): I.c. (quoting Peters, Deike 1998)
- ⁶⁰ *ibid.* (quoting Chant 1996)
- ⁶¹ Astrop, Angela (1996): Urban Travel Constraints of Low Income Households and Females in Pune, India. In: U.S. Department of Transportation (publ.): Women's Travel Issues. Proceedings from the Second International Conference. Washington D.C.
- ⁶² Grieco, Margaret; Turner, Jeff (1997): I.c.
- ⁶³ Grieco, Margaret; Turner, Jeff (1997): Gender, Poverty and Transport. Presentation notes of a talk delivered at the UN International Forum on Urban Poverty (HABITAT) in Florence, November 1997.
- ⁶⁴ Apt, Nana; Turner, Jeff; Grieco, Margaret (1998). Carriers Of Culture: Women As A Means Of Transport In Urban Accra, Ghana. In UN Habitat Newsletter Vol. 4 No 1. 1998. Nairobi.
- ⁶⁵ Peters, Deike (2001). I.c. (quoting Momsen 1991 as cited in Turner and Fouracre 1995).
- ⁶⁶ Hamilton, Kerry (2001): I.c.
- ⁶⁷ Spitzner, Meike (2004): Netzgebundene Infrastrukturen unter Veränderungsdruck – Genderanalyse am Beispiel ÖPNV. Deutsches Institut für Urbanistik (publ.) netWORKS-Papers Heft 13. Berlin.
- ⁶⁸ Peters, Deike (2001): I.c.
- ⁶⁹ Barua, Dwaipayan (2006): Women-only buses hit Chittagong City Roads. In The Daily Star. No. 5 Vol. 655. April 1, 2006. Dhaka / Bangladesh. [<http://www.thedailystar.net/2006/04/01/d60401060866.htm>. 20.04.06]
- ⁷⁰ Information derived from the following Web Sites (20.04.06):
Iran Focus: <http://www.iranfocus.com/mosules/news/article.php?storyid=668>;
Lahore News: <http://www.jang.com.pk/thenews/oct2005-daily/02-10-2005/metro/l1.htm>
Sri Lanka Sunday Observer: <http://www.sundayobserver.lk/2003/08/03/fea23.html>
- ⁷¹ *Ibid.*
- ⁷² Hamilton, Kerry; Jenkins, Linda; Hodgson, Frances; Turner, Jeff (2005): Promoting gender equality in transport. EOC Working Paper Series. London.
- ⁷³ Chaudhuri Zohir, Salma (2003): Integrating Gender Into World Bank Financed Transport Programs – Case Study Bangladesh – Dhaka Urban Transport Project.
- ⁷⁴ Web Site of the Gender and Development Section of the World Bank Group: <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/EXTGENDERTRANSPORT/0,,contentMDK:20192312~menuPK:522666~pagePK:148956~piPK:216618~theSitePK:338726,00.html>. 19.04.06
- ⁷⁵ Peters, Deike (2001): I.c.
- ⁷⁶ Quote imitating Schumacher, Christina (2002): Architektur ist ein Mann, Madame. Hochparterre, Zeitschrift für Architektur und Design, Heft 9, 2002: 38-40.
- ⁷⁷ Grieco, Margaret; Turner, Jeff (1997): I.c.,
- ⁷⁸ Department for Transport (publ.) (2000). I.c.
- ⁷⁹ Web Site of the European Conference of the Ministers of Transport Ministers?: <http://www.cemt.org/ministers.htm>. Last Update. 09.02.06.
- ⁸⁰ Web Site of the Asia Pacific Online Network of Women in Politics, Governance and Transformative Leadership. <http://www.onlinewomeninpolitics.org/statistics.htm>. Data as of December 2003.
- ⁸¹ Pilz, Cosima; Jauk, Daniela (2005): Ergebnisse der ExpertInneninterviews. Auszug aus dem Endbericht des Projektes „Gendersensitives Governance im Bereich Verkehr und Mobilität“ im Auftrag des BMBWK im Rahmen des Projektes NODE. Graz. [Available online: http://www.schoenmobil.net/upload/documents/cms/1__Ergebnisse_Interviews.pdf. 19.04.06]. (own translation)
- ⁸² *ibid.* (own translation)
- ⁸³ *ibid.* (own translation)
- ⁸⁴ Department for Transport (publ.) (2000). I.c.

⁸⁵ Hanlon, Sharon (1996): Where do Women Feature in Public Transport? In: U.S. Department of Transportation (publ.): Women's Travel Issues. Proceedings from the Second International Conference. Washington D.C.

⁸⁶ Covill, Kathleen (2000): Women and Local Transport Plans. In: Centre for Independent Transport Research in London (publ.): Transition No. 11, April 2000. [<http://www.cilt.dial.pipex.com/kathleenwomen.htm>. 19.04.06].

⁸⁷ Website of the United Nations Office of the Special Adviser on Gender Issues and Advancement of Women OSAGI. <http://www.un.org/womenwatch/osagi/index.html>. 20.04.06

⁸⁸ United Nations Office of the Special Adviser on Gender Issues and Advancement of Women OSAGI (publ.)(2001): The Development of the Gender Mainstreaming Strategy. New York. [<http://www.un.org/womenwatch/osagi/pdf/factsheet3.pdf>. 20.04.06]

⁸⁹ Ibid.

⁹⁰ Ibid.

⁹¹ Stiegler, Barbara (2000): Wie Gender in den Mainstream kommt: Konzepte, Argumente und Praxisbeispiele zur EU-Strategie des Gender Mainstreaming. Bonn, 2000.

