Gender, Mobilities and Public Transport

Exploring the daily mobilities of women in Rosengården since the arrival of the train

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Abstract

This thesis is an exploration of gendered daily mobilities amongst local women in Rosengård since the inauguration of the new train station and railway service into the district. Implementing a feminist, qualitative and explorative approach to mobilities, the research poses three principal questions: how women are using public transport in their daily mobilities; what restrictions they are facing in these mobilities; and finally, the extent to which the new Rosengård train station is working towards social cohesion in Malmö. Integrating a theoretical framework of mobility justice with the methodological praxis of time-space geography, the research conducts in-depth travel itinerary diaries with five participating women which are subsequently visualised through a feminist application of qualitative GIS. What results is an examination and visualisation of the participants’ relationships with diverse mobilities throughout Malmö, and ultimately the heavy dependencies these women have on the public transport system to pursue activities and opportunities as part of a happy, fulfilling life. A critical application of space-time geography theory is illustrated within three critical considerations of gendered daily mobilities: temporal, spatial, and those relating to wider concerns of social exclusion. To quote Törsten Hägerstrand (1970), these considerations together formulate an intricate “net of constraints” that capture the life paths of women in their daily mobilities. Ultimately, the research suggests that Station Rosengård has yet to radically expand the mobility opportunities of women in the district, and thus its objective of regional social cohesion – and a step towards reducing wider inequity in public health - in the form of heightened connectivity has been challenged and problematised.

Key terms: Mobilities, accessibility, mobility justice, social sustainability, feminist geographies, time-space geography, constraints, critical GIS, gender, public transportation, Rosengård, Sweden
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1. Introduction

In December 2018 the uncompleted Rosengård train station opened its doors to the public, providing a new passenger rail service to the outlying Malmö district of Rosengård. Linking up an interurban railway line encircling greater Malmö, the new train station represents an extension and evolution of modal transport provision and connectivity into the somewhat segregated district of Rosengård. Currently relying heavily upon an express bus line service, Rosengård will henceforth be able to access central locations across Malmö such as Hyllie, Central Station and from there, on to Copenhagen across the Öresund bridge to Denmark. Divisions - geographic and social - will be eroded, claims the project development team. This promise of enhanced accessibility and connectivity to local residents is central to the overall development strategy. Driven by motivations of social integration, greater equity in regional public health and improving quality of life, the development pursues a goal of social sustainability that has been lauded by the well-founded conclusions of the 2016 Commission for a Socially Sustainable Malmö. This focus on social sustainability posits public transportation service as a means to a socially-just end.

Social justice thus emerges as a critical objective of this transit-orientated urban development in Malmö. Consideration of social justice issues within transport naturally leads to a discussion of potential transport users, the diversity of their social backgrounds and positions, and the varying responsibilities and capabilities that inform their daily mobilities. Within her wider thinking on mobility justice, Mimi Sheller posits the concept of transportation justice as the socio-political movement to overcome the uneven distributions of transport access accorded to citizens in a community, with particular attention to gender, racial, ethnic, age, ability and class barriers to mobility.¹ The question arises, which specific transport user is being prioritised in the service offered by the new railway in Rosengård? To contextualise such an enquiry within wider urban studies theory, Caren Levy identifies the resource of urban transportation and its equitable distribution and access in society as a critical feature of the ‘urban mission’ and the seminal focus of the Lefebvrian concept of ‘right to the city’.² Intrinsic to this thinking is the right to appropriate, participate and exercise autonomous agency through diverse mobilities throughout public space.

This is a research into such questions. Framed within a theoretical and methodological context of feminist research, this study will pursue a qualitative exploration of daily travel mobilities of women in Rosengård, and their engagement with the urban transportation system in Malmö. The role of the new Rosengård train station in pursuing transport-related social justice by expanding accessibilities and eroding social segregation in the district will be problematised.

The daily mobilities of women in Rosengård is thus central to the study. Founded upon the common distinction between potential and revealed movements, I have chosen to interpret

mobility as a ‘potential movement’. I will further frame mobility as a realised capability through which to pursue a full range of functionings in pursuit of a happy, fulfilled life. It has been noted that “the production of some kinds of mobilities often creates immobilities for others”.

The plural concept of mobilities refers to the access distributed to multiple social identities of individuals, and engenders an inclusive approach to simultaneous and intersecting power relations beyond gender between individuals that will be adopted within this research.

So, what can be said for gendered mobility? Feminist historian Dolores Hayden observed that “if the simple male journey from home to job is the one planned for” by transport planners and engineers, then the “complex female journey from home to day care to job is the one ignored”. Dominant transportation systems have traditionally planned around a particularly homogenous transport user: white, male, able-bodied (non-disabled), individual, middle-class rush hour commuter. It is therefore of no surprise that substantial variation in transport use, access and behaviour exists along gendered lines. Looking at disaggregated gendered mobility patterns, women have traditionally moved within different rhythms to men: their journeys are often shorter in terms of distance and time taken to travel, more frequent, and occurring at different times of day. Women who experience simultaneous social identities that interact with systemic forms of oppression and discrimination such as race, class and disability also preside over particularly different travel behaviours and mobilities, as do other variables such as education, marriage status, children and income. Such differentiation in travel behaviour will be explored further throughout this research.

Returning to the focus of the Master thesis, the recently inaugurated Rosengård train station represents the catalyst within the case-study into gendered mobilities and social justice in Rosengård. Lauded as an innovative initiative to reduce regional socio-economic segregation, the introduction of the train station invites a discussion of the daily travel mobilities of local residents and thus its suitability for a wide variety of potential transport users. Such a task requires the disaggregation of the social position and identity of the transport user.

1.1. Problem and Research Questions

The overall purpose of this thesis is to examine the role of the new Rosengård train station and railway service as having an impact upon mobility opportunities of women in the district. In doing so, the enquiry into how women in Rosengård are pursuing mobilities in their daily lives, with particular regard to public transportation use, emerges as critical to the study. Driven by a goal of social sustainability and equity in public health matters, the train station represents a critical regional investment into social inclusion and mobilities of peripheral

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communities. This focus on social integration thus invites a discussion of the differing intersectional social positions of public transport users. A qualitative approach integrated with GIS visual geocoding constitute the research methodologies that will be pursued to capture the intricacies of gendered mobility in Rosengård and to challenge and visualise the normative construction of public transport users beyond cis-white-able-male bodies. Although such considerations feature heavily within the initial planning and decision-making processes of urban transportation development, this research will not investigate this early stage. Rather, this research will focus on the user-experience of public transportation and mobility opportunity.

The research questions framing this study are:

1. **How are women using public transport within their daily mobilities in Rosengård?**

2. **What restrictions are women facing in their daily mobilities in Rosengård?**

3. **How is the provision of the Rosengård train station pursuing transportation justice in its extension of opportunities to women and response to social exclusion in Malmö?**

### 1.2. Delimitations

Within the confines of a Master thesis project, there are naturally a variety of delimitations inherent to my research. Firstly, the intention is not to evaluate in any generalised sense the service provision of the Rosengård train station. It is understood that the train station development is still in its early stage, having only recently been inaugurated 5 months prior to research, and that any shift in modal behaviour among citizens in the area takes time to present itself. Secondly, as fitting with the feminist approach of the study, I do not aim to provide a representative, quantitative and ‘truthful’ depiction of women’s use of public transportation in the city: such a task is beyond the limits of this project, and does not help in responding to the exploratory nature of the research.

Neither is it my intent to study the critical questions arising in the planning process of the development. The official Swedish policy of gender recognition – or gender mainstreaming – within transport planning and (its well-documented shortcomings) would provide a useful perspective in examining the gendered mobility, complemented by the inclusion of multiple social positions in transport design. However, due to the time limitations of the Master thesis I will not be able to examine this dimension of gendered transport planning/decision-making/‘participatory planning’. Rather, I will narrow my research to the transport user experience and preliminary evaluation of the train station development as it is being experience in current everyday operation.
1.3. Previous Research

This thesis both draws upon and contributes to a rich body of research into gendered aspects of transportation and mobility. Incorporating a cross-disciplinary approach that integrates studies of urban theory, human geography, gender studies and urban transportation planning, this section provides a brief overview of the research background into such social considerations of transportation following a recurrent theme of social justice. Much of this theoretical background will be explored in greater depth later in the thesis but for now an introductory discussion will suffice. The following discussion is in no way conclusive of the scale of research undertaken, but rather focuses on the strands of academic study that prove most relevant to this thesis project.

Firstly, there is the broader domain of mobility and accessibility studies within the social sciences that emerged with the New Mobilities Paradigm of Sheller and Urry (2006). Encouraging a holistic and nuanced understanding of everyday mobilities as part of wider power structures and creation of identities, Mimi Sheller builds on this theory by offering a comprehensive study of ethical and political questions of movement in her seminal work on mobility justice. Despite a broader thinking of mobility as more than transportation, Sheller does elaborate upon the notion of transport justice in her call for a more holistic synthesis of local, urban and global questions of social justice with regard to mobility and movement. Contributing voices to this ‘turn’ in mobility conceptualisation include but are not limited to Tim Cresswell, Tanu Priya Uteng, Caren Levy and Robin Law. This research on mobility justice largely draws upon the theoretical foundation of the Capabilities Approach as formulated by Amartya Sen and Martha Nussbaum, which posits that one’s opportunities in life are founded upon one’s capacities both internal and those external imposed by our environments. Crucially, this approach ‘seeks to ensure the social provision of certain basic capabilities and minimum thresholds’, of which freedom of movement represents a key capability. Under the umbrella of mobility justice theory, a wealth of research into gendered travel behaviour and ‘travel choice’ exists that proves critical to this study. Traditional gendered studies from Doreen Massey and Caren Levy have informed the intrinsically feminist works of Tim Cresswell Mei-Po Kwan, and Petter Naess, among others. These studies have drawn upon space-time geography epistemological influences as a socially progressive and sensitive method to examine phenomena such as gendered mobility patterns; we will return to such methods later in the thesis as they play a crucial role in this analysis. Tanu Priya Uteng, Talia McCray and Nicole Brais have all contributed comprehensive case-studies exploring and

13 Sheller, Mimi. Mobility Justice. 2018
analysing the pivotal role of transportation in the mobility and accessibility opportunities of women from particularly marginalised communities in Norway and Montreal, respectively. Corresponding to the above research fields, the vast amount of attention accorded to focus on social exclusion resultant from a lack of transportation distribution, or ‘transport poverty’, is of great relevance to this study. Karen Lucas is of particular notoriety in this field, with her breadth of research emphasising the social justice dimension of transportation. Lucas illustrates the direct causal link between levels of social exclusion and lack of adequate, efficient transportation resources. Often referred to – yet not to be used synonymously - as ‘transport disadvantage’, ‘accessibility poverty’ or quite simply ‘transport-related-social-exclusion’ or ‘accessibility poverty’, she posits this unequal distribution of resources as critical to experiences of inaccessibility, amidst a wider climate of global austerity politics, and outlines the key factors of transport planning that exacerbate trends of social exclusion. Lucas corroborates the wider research community here with her active engagement of space-time geography methodologies and thinking derived from the Capability Approach. Congruent positions on mobility-informed social justice can be found by the likes of Noel Cass, Elisabeth Shove, John Urry and Karel Martens.

1.4. Hypothesis

The hypothesis for this research is twofold. Firstly, I anticipate to observe a multiplicity of mobilities among women in Rosengård and to visualise the multi-layered dimensions of gendered travel behaviour so well-documented in transport and mobility research. Among these mobilities, I anticipate observing the complexity of restrictions encountered by women in their daily undertakings of mobility. The second hypothesis concerns the transport service provided by the Rosengård train station: based on a preliminary overview of both spatial and temporal attributes of the rail service, I make the supposition that it is not currently providing a sufficiently convenient and inclusive service that meets the diverse needs of those in society who are often marginalised by official decision-making processes. Ultimately, I do not expect the transportation resources provided by the train station to radically enhance the mobility and accessibility opportunities of women in Rosengård. Whilst the extent to which the train station contributes to actions of social and transport justice is unclear, I do not hypothesise a considerable impact on the wider issues of social segregation and regional inequity at this early stage in the transit-orientated urban development.

1.5. **Outline of study**

Following this introductory chapter, in which I have laid the foundation of the research aim for the Master thesis, there will be a chapter assigned to the object of study that will introduce Rosengård and the train station in greater depth. Subsequently, there will be a chapter discussing the theoretical framework that lays the foundations for the study, succeeded by a chapter detailing the methodological reflections, decisions and praxis of the research process with regard to data collection and analysis. A chapter presenting the results from the data collection and pursuit of a nuanced thematic analysis will then follow. To conclude, there will be a reflection on the overall research process and an analytical response to the overriding research questions that have motivated this Master thesis.
2. **Object of study: Rosengård and Station Rosengård**

This chapter is a brief introduction to Rosengård as the urban area of focus for this study, and a description of the new train station and passenger rail service now operating in the area. Before making headway with the analysis, it is of benefit to the reader to understand not only the background context and modal service of this district but also the perceptions of stigma so often attached to Rosengård that contribute to a fuller understanding of mobilities and social justice concerning its residents.

2.1. **Moving in Rosengård**

Geographical speaking, Rosengård is a city district located in central eastern Malmö, a southern municipality of Skåne county and the third-largest city in Sweden. Lying 30km across the Öresund bridge from the Danish capital of Copenhagen, Malmö serves as a significant transit hub in the Öresund region providing connectivity both across the border and to further regional locations within Skåne, as well as to larger Swedish cities of Stockholm and Gothenburg via a high-speed rail link.

As for public transportation, Rosengård has been currently relying on an urban bus service provided by Skånetrafiken (the transportation authority of Skåne region). Bus lines 5 and 35 provide more or less direct access from central Rosengård to central locations of downtown Malmö, such as Malmö University and Central Station (Malmö C). To help understand the distance between the districts, a brief overview of distance and transport modes: it takes approximately 17 minutes by bus, 22 minutes by bicycle, 13 minutes by car and 1 hour and 5 minutes by foot from Central Station to central Rosengård (bus stop Ramels Väg).  

The addition of a new passenger railway service thus offers the possibility of increasing the mobility opportunities of residents of both Rosengård and greater Malmö. The new train station is built along a pre-existing train track the Continental Line (Kontinentalbanan) that connects Malmö to Trelleborg - previously reserved for commercial traffic but since 2015 re-opened for passengers - and has traditionally served to highlight the distinction in boundaries between East and West in Malmö. Costing an approximate 155 millions kronor ($16m), the renovation of the rail line is intended to ‘bind Malmö together’ as the spearhead of the wider Amiralstaden urban development, linking up the somewhat segregated districts of Östervärn, Persborg and Rosengård directly to the Central Station in one direction, and to the peripheral shopping areas of Svågertorp and Hyllie in the other, thus forming a ‘shuttle’ type service.

As for the service itself, there will be a train each direction once every half an hour during the daytime hours of 06:00 and 22:00. The traffic is made up of the Pågatåg passenger line running from Malmö C to Kristianstad, and another ‘pendulum’ line between Hyllie and

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18 Googlemaps
Malmö C. As part of their longer-term strategy, Skånetrafiken hopes to integrate this commuter traffic with the Öresund transit hubs of Lund and Copenhagen and thus enhance connectivity in the region. See figure below for further detail.
2.2. Living in Rosengård

Rosengård was first built as part of the Swedish million program, an ambitious public housing strategy to ensure affordable and sufficient housing during the ten-year period of 1965-1974.\textsuperscript{21} Replacing the insufficient living environments of the industrialising urban centre of Malmö, the new housing stock was to create new modern lives for working class communities and offer chances of social mobility.\textsuperscript{22} However, despite their social-democratic and functionalist vision, many of the million programme neighbourhoods soon became areas associated with neglect and degeneration. Rosengård itself - already described as a “newly built slum” in 1966 – witnessed many of its residents move to single-family detached housing further outside Malmö, whilst less affluent communities moved in. Before long Rosengård – and neighbourhoods like it – became symbols of increased immigration and social problems such as unemployment and crime. Stigmatised across international media outlets for its urban rage and social integration problems, Rosengård has become a symbol of governmental failure to secure equal opportunities and living conditions for all citizens irregardless of socio-economic background.\textsuperscript{23}

Today there are approximately 24 000 people residing in Rosengård, of which 61\% have a foreign/non-Swedish background (compared to 33\% across the rest of Malmö) and thus one of the most culturally diverse districts in Malmö.\textsuperscript{24} The district can be perceived as at the centre of a struggle of narratives: on one hand global media reports tell a story dominated by urban rage, criminality and social exclusion. On the other, talking with local residents attest to the feelings of safety and enjoyment of their ‘home’ town. Ristilammi here attests to the struggle of narratives as he claims that much of this negative symbolisation was fed by many stories and narratives that were not necessarily connected to the reality of the district.\textsuperscript{25}

However, despite such feelings of safety and enjoyment amongst residents, it is a fact that Rosengård does suffer from an unequal level of social mobility, inclusion and opportunity. Employment rates are consistently lower than the Malmö average, with 67\% unemployed in Rosengård compared to the 42\% Malmö average. Similar are rates of higher education, with 24\% pursuing higher tertiary education compared to the regional 27\%.\textsuperscript{26} These inequalities have been found to have a broader impact on public health across the region.

\begin{flushright}
\textsuperscript{21} Hallin, Per-Olaf. STADENS BRÄNDER Del 1 - Anlagda bränder och Malmö's sociala geografi. 9 (9) .2010.
\textsuperscript{22} Ristilammi, Per-Marku. Rosengård och den svarta poesin: en studie av modern anoorlundahet. Ostlings bokförl, 1994
\textsuperscript{24} Statistka Centralbyrån (SCB) (2017)
\textsuperscript{25} Ristilammi, Per-Marku. Rosengård och den svarta poesin. 1994
\textsuperscript{26} Statistka Centralbyrån (SCB) (2017)
\end{flushright}
2.3. Malmö Commission and Amiralsstaden

It is this aspect of inequity in regional public health that lies at the heart of the Commission for a Socially Sustainable Malmö (2013). Residents in Malmö live within a generous welfare society in which life expectancy is among the highest in Europe and social vulnerability among the lowest: there has been substantial investment into health and welfare as part of the country’s social-democratic political heritage. Nevertheless, it has been found that the average life span can differ as much as eight years between the different districts of Malmö.\(^{27}\)

Although not clearly specified, residents of neighbourhoods such as Rosengård are directly impacted by such inequities. Region Skåne together with the City of Malmö created the Malmö Commission in order to research, highlight and implement a holistic policy of social sustainability that they believe is necessary to tackle such great social and health disparities. In doing so, it aims to challenge and democratise the process of planning, management and governance with a more holistic, bottom-up approach. There is an emphasis on ‘knowledge alliances’ with local communities and organisations, reflecting the overall focus on establishing a social investment policy that transforms social structures to promote more equitable conditions for local residents.

The Amiralsstaden urban development project, whose geographical centre lies at the Rosengård train station and extends along the principle artery street leading to downtown Malmö (Amiralsgatan), is the principle case-study recommendation of the Malmö Commission. It was considered necessary to implement an urban development project whereby physical planning contributes to the wider goal of social sustainability and improved living conditions in the area, and for the whole of Malmö in the longer term.\(^{28}\)

With the Rosengård train station as the focus of the thesis, an insight into the wider Amiralsstaden development is of particular interest. Along with increased provision of housing and jobs, the development aims to bring connectivity and socio-economic prosperity to the wider Öresund region with the opening of passenger traffic into the districts of Östervärn, Persborg and Rosengård. It is therefore clear that the new train station and rail service is motivated by visions of social sustainability, connectivity and improved living conditions.

\(^{27}\) Commission for a Socially Sustainable Malmö (2013)

3. Theoretical framework

The objective of this chapter is to present the theoretical framework necessary to answer the overarching research questions: how are women using public transport in Rosengård, what are the restrictions to such mobilities, and how is the train station pursuing social justice in its extension of opportunities to women?

Divided into two sections, the first discussion of theoretical background provides a wider, contextual understanding to this research, whilst the subsequent section details the concrete theoretical toolkit implemented throughout the methodological and analytical processes of the study. In order to understand the mobilities of women in Rosengård and their relationship with the public transportation system in a holistic and nuanced manner, I have decided on these two sub-sections and theoretical approaches to guide the study: the perspectives of ‘mobility justice’ integrated with feminist geographical tools together encompass a socially-sensitive approach to gendered mobilities. This theoretical foundation will subsequently frame the methodological choices explored in later chapters.

3.1. Theoretical background of Mobility Justice

Firstly, there will be a closer look at the critical stance of ‘mobility justice’, its wider theory behind pluralised mobilities and how these can be understood as fundamental ‘capabilities’ of any given citizen. This approach, adopting a social-science lens, is highly sensitive to how insufficient mobility/access to opportunities in society can compound pre-existing socio-economic factors of social exclusion such as poverty, austerity and discrimination and exacerbate the marginalisation of vulnerable social groups. Concepts such as ‘transport poverty’ and ‘transport-related-social-exclusion’ serve to highlight such phenomena. Urban transportation services, as one example of ‘visible’ mobility, are thus critical in the provision of these opportunities. This approach can thus be read as one of social justice. As an extension of this mobility justice discussion lies the question of gendered access to movement and space, which can be firmly located within the expansive field of feminist geography. In this sub-section there will be an introduction to gendered travel research that presents quite simply how men and women are using transportation services differently and thus the impact this trend has on opportunities of movement and accessibility. The concept of ‘trip chaining’ is one such example, describing travel with multiple, frequent destinations and shorter trip times. Such research is supported by official transport data disaggregated by gender and other categorisations. However, in line with the critical tradition of feminist geography and gender studies, there will subsequently be a critique of this binary understanding of gender, as well as a sensitive consideration of the intersecting power relations across various social groups (gender, class, ethnicity, capability).
3.1.1. Mobility, Accessibility

Central to this study is the definition and understanding of the key concepts and measuring indicators that run throughout the research: mobility and accessibility. Before we delve deeper into the theoretical framework of ‘mobility justice’, it is first necessary to define mobility, our intended usage of the term and the theoretical framework that guides such research. Defined simply as the common distinction between potential and revealed/realised movement, I have chosen to define mobility as a ‘potential movement’. The classic, simplified description of mobility refers to any movement in general, whilst accessibility goes a step further to describe measuring ease of reaching destinations, that includes mobility, connectivity and proximity. There has been a recent surge in interest for accessibility within transport planning, evolving from a focus on ever-increasing speed and unfettered mobility/movement (too often associated with the expansion of automobile transport) towards a focus on access; in other words, less emphasis on speed rather than the means of accessing destinations. In this sense, there has been some prioritisation in understanding accessibility as providing a more holistic and socially conscious approach to transportation.

3.1.2. New Mobilities Paradigm

Going beyond this simple definition of mobility and accessibility, we come to a shift in theoretical perspective towards the socio-spatial dimensions of unequal movement with the New Mobilities Paradigm - as instigated by Mimi Sheller and David Urry - and a renewed emphasis on the pluralised concept of ‘mobilities’. Sheller claims that ‘mobilities have always been the precondition for the emergence of different kinds of subjects, spaces and scales’. The emphasis on the plurality of subjects and their social positions emerges as critical to the wider discussion of mobility justice and embodies an intersectional feminist perspective. Therefore, central to this paradigm shift are the critical intersections of power, justice and mobility rights. The Mobilities Paradigm thus interprets mobilities as instrumental in the production of urban space. As co-founder of this theoretical shift, Mimi Sheller makes a particularly fitting contribution to this discussion. According to Sheller, mobilities research focuses on the ‘kinopolitical’:

“the constitutive role of movement within the workings of most social institutions and social practices and focuses on the organisation of power around systems of governing mobility, immobility, timing and speed, channels and barriers at various scales”

She continues to emphasise the crux of ‘mobility regimes that govern who and what can move (or stay put), when, where, how, under what conditions, and with what meanings.’ When it comes to the socio-spatial distribution of movement, Sheller posits that ‘many people do not have access to easy mobility’: such a condition can be attributed to facing impairment due to

mundane design features like stairways, lack of public toilets, and friction due to cat calling or racial aggression aimed at minorities, or rules that exclude homeless people or street vendors from sidewalks.\(^{35}\) This nuanced attention to the multiple subject experiences of mobility and access to movement is critical in our research into women’s mobilities in Rosengård. Further within this paradigm, there has been an extension on subject position and mobility thinking with the concept ‘motility’ inferring potential movement. Sheller describes motility as a way of measuring capabilities for movement that ‘emphasises the way in which movement depends on the affordances of the environment in which we found ourselves in combination with our own abilities’\(^{36}\). Urry suggests the label ‘network capital’ to describe such mobility, in the same sense construction as financial, social or cultural capital, which lends itself well to an understanding of mobility and ‘network’ as a distributed resource, as opposed to perhaps an innate right to mobility, as the right to the city.\(^{37}\) To summarise:

“All people have different capacities and potentials for movement but in general we can say that more privileged groups control more potentials, enjoy greater ease of movement, and can access a wider range of different kinds of motility”\(^{38}\)

In light in of this attention to ‘motility’, or the potential aspect of mobility and movement, it is of benefit to look closer at the interpretation of mobility as a fundamental capacity, or capability.

### 3.1.3. Mobility as Capability: the Capability Approach

The Capability Approach offers an additional understanding of mobility for this study. Formulated by Amartya Sen and Martha Nussbaum, the Capability Approach posits that one’s opportunities in life are founded upon one’s capacities both internal and those external imposed by our environments.\(^{39}\) In relation to this study, freedom of movement and mobility thus represents a key capability.

Originating as an alternative to measuring ‘development’ in terms of economic growth and material welfare, the capability approach views the objective of development rather as the ‘promotion and expansion of valuable capabilities’.\(^{40}\) These capabilities offer the freedom to achieve valuable ‘functionings’ in society, ranging from basic functionings such as being able to feed oneself or having shelter, to more complex functionings such as forming friendships, self-respect and pursuing meaningful employment.\(^{41}\) Crucially, this approach ‘seeks to ensure the social provision of certain basic capabilities and minimum thresholds’\(^{42}\) and therefore provides a framework for the measurement and assessment of individual well-being and social arrangements, and the design of policies and proposals that concern social change in

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\(^{35}\) Ibid, 2018.

\(^{36}\) Ibid, 2018.


\(^{38}\) Sheller, Mimi. Mobility Justice. 2018.

\(^{39}\) Nussbaum, Martha. ‘Creating Capabilities: The Human Development Approach’. Political Studies Review. 10 (3). 2012.


\(^{41}\) Kronlid, David. ‘Mobility as Capability’, 2008.

\(^{42}\) Sheller, Mimi. Mobility Justice. 2018.
society. As David Kronlid succinctly puts it, the capability approach examines and evaluates ‘what people are able to do and to be’. Robeyns argues that the Capability Approach demands:

“That our evaluations and policies should focus on removing obstacles in [people’s] lives so that they have more freedom to live the kind of life that, upon reflection, they have reason to value”

The emphasis then on development (design and policy implementation) stems from a social justice perspective rather than a simplified economic calculation (GDP being a good example). Looking then at issues of mobility justice within this research, there seems to be a general consensus within the field emphasising the suitability of mobility as a key capability, specifically one of Amartya Sen’s ‘realised capabilities’ or functionings. Relating back to the wider theoretical framework of mobility justice, Tim Cresswell highlights the theme of social justice as he claims that ‘uneven geographies of oppression are also evident in people’s differential abilities to move’. Kronlid supports this view by identifying the relevance of the capability approach within the study of intersectional social inequalities – and specifically for the gendered inequalities at the centre of this research. The Capability Approach thus provides a useful framework through which to study gendered mobilities:

“The fusion of gender, mobility and capability highlights and specifies the ethical dimension of mobility in terms of social exclusion and discrimination, and raises important theoretical questions concerning the nature of mobility as capability.”

There have been several studies that have integrated this Capability Approach into their research methodologies and analysis, many of which have done so in order to answer questions of gendered inequalities concerning mobility. To take an example, Tanu Priya Uteng made a study of gender, ethnicity and constrained mobility and the resultant social exclusion amongst non-Western immigrant women in Norway. With the subject itself a relevant and inspiring research topic for this thesis, Priya Uteng highlights the ‘capability loss’ and ‘exclusion from capability-building opportunities’ as part of wider societal exclusion due to immobility experience by immigrant women. The Capability Approach thus provides a useful theoretical framework through which to study mobility as intrinsic to human well-being, and demonstrates how mobility – whether defined as social/social/existential mobility – be regarded as important a capability as others.

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48 Priya Uteng, T. Gender, ethnicity, and constrained mobility: insights into the resultant social exclusion (2007)
### 3.1.4. Transport-related Social Exclusion

Now it is time to take a deeper look at how these theories of mobility, accessibility and capability present themselves in systems of urban transportation, and result in the social justice concerns of social exclusion and segregation: issues that bear particular relevance to our case study in Rosengård and serve as the central motivations behind the extension of passenger rail into the area with the new train station. It is here that we narrow the scope of our mobility justice analysis to questions of transportation disadvantage and justice. The concept of **transportation justice** can thus be defined as the socio-political movement to overcome the uneven distributions of transport access accorded to citizens in a community, with particular attention to racial, ethnic, age, ability and class barriers to mobility.\(^{50}\) Similar is the concept of **transport poverty, or transport disadvantage**, hereby defined by Karen Lucas as the combination of: inability to afford the cost of transport; lack of access to transport; the resulting lack of access to key life activities; and finally the exposure to negative transport externalities such as air pollution and unsafe roads.\(^{51}\)

These factors of immobility and lack of access that contribute to a state of transport poverty also serve to exacerbate wider problems of social exclusion and segregation of the more vulnerable communities in society. Karen Lucas and her seminal research into issues of transport and social exclusion are particularly fitting to this discussion. First of all, Lucas chooses to adopt the widely-held definition of social exclusion as reaching beyond a simple description of poverty to provide a more multidimensional and dynamic concept of deprivation.\(^{52}\) Levitas et al clarify the concept in highlighting the ‘lack or denial of resources, rights, goods and services and the inability to participate in the normal relationships and activities available in society’\(^{53}\). Critically, this inaccessibility to essential goods and services leads to an exclusion from essential planning and decision-making processes: such a trend further compounds situation of social hierarchies and segregation.\(^{54}\) This lock-out from social participation of the community is expressed by Sheller as she describes how the ‘experiences and input of marginalised communities are often disputed or disbelieved by institutions of power’ and calls for a restructuring of decision-making systems centred on citizen experience: one can see the parallels with Rosengård and the Amiralsstaden urban development, which does promote a policy of community engagement and valuation of ‘local knowledge’ yet the extent to which it meets these goals remains unanswered.\(^{55}\)

Throughout her research Lucas combines these concepts of transport disadvantage together with social exclusion to conceptualise the term **transport-related social exclusion**. In defining transport-related social exclusion, Karen Lucas believes that:

> ‘it is essential to recognise that the concept of social exclusion emphasises the interactions between those causal factors which lie with the individual (such as age, disability, gender and race) and those factors that lie with the structure of the local

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54 Lucas, Karen. ‘Transport and Social Exclusion: Where are we now?’ 2012.
Transport and/or mobility inequality is not simply a recent trend in transportation literature. As early as 1981, Banister and Hall posited that transport had an incontestable impact upon social outcomes for different sectors of UK society. More recently, transport surveys are demonstrating that those who suffer disproportionately from transport disadvantage are usually the poorest and most socially disadvantaged within society. Is often women and marginalised communities that suffer disproportionately from such exclusion. It is here that the issue of public health arises in the theory: according to Sheller, the daily mobility of walking, cycling and public transport actively promotes health in four ways: providing exercise, reducing fatal accidents, increasing social contact and reducing air pollution. The unequal distribution of access to adequate public transport and self-mobility infrastructure - combined with other factors of unemployment, political austerity, social exclusion, stress and poor nutrition - thus exacerbates the effects of unequal mobilities on the public health of society’s most vulnerable. Critical to our study is Lucas’ outline of key features of transport systems that contribute to the exclusion of certain population groups in society: physical exclusion (design-based limitations); geographical exclusion (access limitations); economic exclusion (high transport costs); time-based exclusion; and fear-based exclusion (perception of safety/unsafety), amongst others. Consideration and investigation of these factors - particularly those of geographical/spatial and time-based exclusion – will feature heavily throughout the methodological choices of this research into the Rosengård train station and its impact upon women’s mobility in the area.

Therefore, to conclude this theoretical strand of ‘mobility justice’, what we must retain from the framework is the unequal distribution of access to mobility - with regard to urban transportation systems - in society and the severe impacts such inequity has on social welfare and inclusivity of society’s most vulnerable and marginalised communities, for example women, immigrants, people of colour and queer communities. Furthermore, the extent to which capability and the capacity for one’s potential movement are informed not only by one’s personal abilities but also by the infrastructural environment affordances surrounding them is of critical relevance to this study. Overall this approach, adopting a social-science lens, is highly sensitive to how insufficient mobility and access to opportunities in society can compound pre-existing socio-economic factors of social exclusion such as poverty, austerity and discrimination and exacerbate the marginalisation of vulnerable social groups.

56 Lucas, Karen. ‘Transport and Social Exclusion: Where are we now?’ 2012.
58 Lucas, Karen. ‘Transport and Social Exclusion: Where are we now?’ 2012.
60 Lucas, Karen. ‘Transport and Social Exclusion: Where are we now?’ 2012.
3.1.5. Gendered Mobility and Transport Behaviour

A feminist critique of gender-blind transportation research and planning has been recognised in mobility research since the 1970s, resulting in a body of work dedicated to ‘women and transport’. As a significant contributor to this research, Robin Law applauds such attention accorded to the gendering of urban geography yet does challenge the simple ‘journey-to-work’ focus that dominates the research. Rather, Law insists upon a more nuanced understanding of women’s daily mobility that links mobility to such aspects as the gendered division of labour and activities, gendered access to resources, gendered subject identities and gendered built environments.

A consideration of this daily mobility is helpful when looking at the spatial variations within gendered travel behaviour patterns, most of which are collected, processed and presented through quantitative methods. Put simply, men travel more than women: work trips account for the highest proportion of both men’s and women’s daily trips, yet men travel greater distances, more direct journeys, and usually in modes of transport associated with a more affluent lifestyle (i.e. automobiles). Women tend to have more complicated but shorter travel patterns, as they often combine journeys to work with taking children to school and childcare, caring for elderly relatives as well as other gendered-routine activities such as grocery shopping and medical visits, and tend to use cheaper modes such as public transport and self-mobility (walking, cycling). This phenomenon of pursuing several multi-purpose journeys within daily travel has been labelled ‘trip-chaining’, and is often associated in transport policy with gendered mobility. Linking these differentiations back to Law’s holistic view on daily mobility, Tim Cresswell clearly identifies the key factors that manifest gendered mobilities as he argues that:

“gender-differentiated roles related to familial maintenance activities place a greater burden on women relative to men in fulfilling these roles resulting in significant differences in trip purpose, trip distance, trip duration, transport mode and other aspects of travel behaviour”

Critically, it is this phenomenon of gendered trip chaining behaviour that inspires the principle research questions of this study: I wanted to examine how the extension of a passenger rail service into Rosengård would provide an equally gender-sensitive service that incorporates these differential mobility patterns of various social identities in order to enhance women’s mobility and accessibility in Malmö.

The above description of gendered travel behaviours is established within traditional gendered mobility research and has predominantly focused on the societies of modern Western countries. Caren Levy remedies such an outdated and narrow lens of research with her contribution of a Global South perspective, exploring a wealth of gendered travel phenomena from the intricacies of modal choice disaggregated by gender and race in

65 Cresswell, Tim., Uteng, Tanu Priya. Gendered Mobilities. 2008
Johannesburg, South Africa to purposes of trips in Hanoi, Vietnam.^{66} Critically, Levy incorporates an intersectional feminist approach by examining how the intersecting social identities of individuals beyond a simplified, binary understanding of gender, as well as the power relations of race, impact upon their access to mobilities and modal choices: figure 3 illustrates how both men and women of colour experience more restriction in their modal choice than their white counterparts. Sumeeta Srinivasan contributes to this intersectional, Global South perspective as she compares the mobilities of low-income women in both Chennai, India and Chengdu, China.^{67} Due to the high levels of ethnic diversity and heterogenous communities living in Rosengård, these intersectionally-feminist theoretical perspectives prove of great relevance to the case study in question and enable a socially-sensitive, nuanced and feminist methodological approach later in the research.

![Figure 3. Modal choice by gender and race, Johannesburg, South Africa. (Source: Adapted from 2002 census data for Johannesburg)](source)

Ultimately, this overarching theoretical background of gendered mobility provides a fitting framework for a number of reasons. The sensitive consideration and critical engagement of multiple subject positions (in this case, those of diverse public transport users) and their distinct, varying potentials and capabilities is key to this thesis research examining women’s mobility patterns in response to new public transport service provision. I believe that the incorporation of concepts such as the Capability Approach as well as those of distribution justice and transport-related-social-exclusion serve to highlight the intricacies and nuance of gendered mobilities in Rosengård. As we have already seen, the attention to the socio-spatial accessibilities found within this theoretical framework are even more fitting due to the socio-political motivations of the extension of the passenger rail service into Rosengård. Seeing as goals of social sustainability, connectivity and inclusivity have driven the Amiralsstaden’s transit-orientated urban development, it is thus necessary to approach an analysis of this service with an accordingly socially-conscious theoretical background.


3.2. Theoretical Toolkit

Having looked at the theoretical foundation that frames the contextual understanding of this research, it is now necessary to explore the specific theoretical and methodological fields that provide more concrete analytical tools going forwards: the thinking and praxis of space-time geography, and the analytical visualisations of feminist GIS.

3.2.1. A Feminist Application of Time-Space Geography

3.2.1.1. Hägerstrand’s Time-Space Geography

Having looked at the theoretical foundation that frames the contextual understanding of this research, it is now necessary to explore the specific theoretical field that provides more concrete analytical tools going forwards: the practice and thinking of space-time geography. Developed in the 1970s, Torsten Hägerstrand formulated a transdisciplinary theory of time-geography that focuses on the intricate spatial and temporal processes of individuals that serve as the basic dimensions of any given analysis.68 Central to the practice of time-geography is the provision of a ‘visual language’ accorded to dynamic processes, in which possible behaviour – transport behaviour in this case – is visualised through 3D space-time prisms that aim to highlight the solo individual and their potential for movement across space and time within the greater constraining processes of socio-political institutions (i.e. work hours, family commitments, public transport schedules). In spite of this, Hägerstrand contemporary Bo Lenntorp has emphasised that this visualisation is ultimately produced by the underlying ontology and key concepts of time-geography, and not the other way around.69 The concepts then are critical. Ultimately, Hägerstrand expresses the notion of ‘constraints’ in relation to spatial and temporal restrictions to living individuals and their potential activities, otherwise known as ‘programmes’ or ‘projects’.70 In order to achieve the ‘goals’ of certain activities, one must have access to particular conditions. Kajsa Ellegård summarises how time-geography facilitates analysis helping to understand the problems that arise when intentions and goals of an individual clash with what is actually possible to realise in the material world.71 In relation to daily mobility and transportation, Hägerstrand himself applied daily activity programmes to examine the opportunities that people with different access to transport had to fulfil their goals, ultimately highlighting inequities in access amongst particular social groups: the application of time-geography within this research into mobility and transport-related social exclusion thus seems suitable.72

The main concepts within time-geography that we will employ in this research are hereby defined. Time-geography centres round three specific constraints, or restrictions, that frame an individual’s opportunity to access activities across time and space: capability constraints describe the ‘limitations due to an individual’s biological structure and/or the tools they can

command’ (i.e. having the skills to drive a car); **coupling constraints** describe the ‘limitations that define where, when, and for how long, the individual has to join other individuals or resources/materials in order to move, produce and consume’ (i.e. the actual car needed to be able to drive); and **authority constraints** that describe the ‘limitations when the domain of activity is under control of a given individual, group or authority’ (i.e. how national governments require a certain age before learning to drive). This conceptualisation of **constraints** makes reference to the Capability Approach discussed earlier in this chapter: the fundamental internal and external capacities needed to achieve a fulfilling life, of which mobility is critical. Such thinking of **constraints** and **capabilities**, combined with an intersection of gendered relations, will thus serve as key tools of analysis later in this study.

### 3.2.1.2. Feminist Interventions

In light of the enquiry into gendered mobility and transportation of this thesis, it is fitting to apply the concepts of time-geography from a feminist perspective. Christina Scholten et al express the suitability of a time-geography conceptual framework for the study of gendered subjects and daily mobility, and therefore its suitability for this very research project. There is a traditional feminist critique of Hägerstrand’s theory as having roots in a ‘privileged and hegemonic masculine perspective’ and handling issues of corporeality and space in a poorly developed manner insofar as it has often erased the gendered difference and social position of the *individual*, assuming a cis-male body: much the same way that standard transport planners and engineers have approached gender/embodiment. However, contemporary feminist research has reclaimed the practice by applying the intricate, bottom-up attention to experiences of everyday life of women and those social groups and communities experiencing vulnerability and marginalisation (for example those living gendered, racialised, disability-related discriminations). It is therefore particularly appropriate for studies of women’s subjective daily mobility and transportation accessibility. Scholten et al provide a seminal work on re-thinking time-geography and daily mobility from a gendered perspective. They claim that as a theoretical framework and analytical tool it:

> ‘gives the possibility to visualise constraints, dominant projects and individual reach by creating images of the everyday struggles between activities, decision-making, hindrances and intervening policies from an individual perspective and at a local geographical level’.

Subsequently, they articulate the feminist project of highlighting power relations in society and how they contribute to spatial-temporal arrangements, determining who controls space and whose time is valued. With regard to time, it tends to be the woman and the mother in households that has had to divide time/attention to both productive and reproductive labour.

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occupations, to cite a Marxist feminist perspective. Women tend to have more responsibilities associated with maintaining a household and raising a family, adding further constraints on their time that results in a minimising of spatial affordance of opportunity: to take the classic example of childcare, a woman that needs to combine schedules of dropping off/picking up children at school, accompaniment to activities and medical appointments, and preparing dinner with full-time employment outside the domestic home sphere, it is not difficult to see the restriction to a woman’s ‘radius of action’ in space. Rather, the white working man tends to be prioritised in many areas of planning and policy, yet particularly in traditional transport organisation. Ultimately Scholten et al identify the key advantage of the time-geographic visualisations as a critical method to equip official transport planners and policy makers with the tools to initiate discussion about the restrictions to access to opportunity among men and women, and to eventually affect physical change that can overcome such unequal conditions.

A feminist engagement of time-geography theory has complimented a breadth of research into gendered mobility and transport-related social exclusion in recent times: Mei-Po Kwan has long employed time-space methodology, along with critical feminist GIS, to investigate and measure gendered accessibility to urban opportunities in diverse geographic locations⁸⁰; Tanu Priya Uteng examines the time-space mobility and state of social inclusion of immigrant women in Norway⁸¹; Talia McCray and Nicole Brais visualise using GIS the constraints to daily accessibility of low-income women in Quebec⁸²; and Sumeeta Srinivasan compares the mobility of low-income women in both Chennai, India and Chengdu, China⁸³. This inclusive research based on experiences of marginalised women, including those in the Global South, denotes the theoretical framework as a radically intersectional one appropriate for this study of women’s daily mobility in Rosengård. Overall, it has been made evident that a feminist application of time-space geography theory enables an intersectional, socially-sensitive approach to gendered mobility, providing analytical tools and terminology that reveal the obstacles and constraints framed by time-space conditions that women experience in their daily mobility: tools we will see later in the analytical chapter of this thesis.

### 3.2.2. A Critical, Feminist Application of GIS

The secondary theoretical toolkit that I will implement in this research is a feminist application of geographical information systems (GIS) as a means to critically visualise and examine the complexities of gendered daily mobilities of women in Rosengård. There is a wealth of research into the value of GIS praxis integrated with qualitative research methods, yet none is more canonical that the work of Mei-Po Kwan, upon which I rely heavily throughout my research. I first give a brief summary of the critical turn within GIS tradition. Previous uses of

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⁸¹ Uteng, Tanu Priya. ‘Gender, Ethnicity, and Constrained Mobility: Insights into the resultant social exclusion’. 2009.

⁸² McCray, Talia., Brais, Nicole. ‘Exploring the Role of Transportation in Fostering Social Exclusion: The use of GIS to support qualitative data’. Networks and Spatial Economics. 7 (4). 2007.

GIS have been rooted within the normative, positivist background of geography’s ‘quantitative revolution’, in which it was most predominantly used to make universally applicable principles or generalisations about spatial phenomena.\(^8^4\) Kwan posits the inadequate representation of space and subjectivity of traditional masculinist GIS practice.\(^8^5\) As found within the normative practice of cartography, the way in which GIS translates space into X- and Y-coordinates has been interpreted as an example of ‘authoritarian knowledge’ insofar as it claims to represent objective knowledge of spatial formations, thus clashing with the fluid epistemology of feminist geography.\(^8^6\) It is this masculinist practice of GIS and pursuit of objective, positivist knowledge of the world that Kwan rejects, explaining that “the purpose of using GIS in feminist geographic research is not to discover the universal truth, but to understand the gendered experiences of individuals across multiple axes of difference”.\(^8^7\) Donna Haraway supports this argument by citing Foucault, his conceptualisations of the ‘panopticon’ and the power of the elevated vision and vantage point that represent the reliance on visual technologies in modern society for establishing truth claims and sustaining political power.\(^8^8\)

As key to this feminist research into daily mobilities of women in Rosengård, it is important to note one of the central principles of feminist research methodologies: though no single tool guarantees a universally feminist approach, it is the sensitive consideration of power relations and the production of knowledge within society that is critical.\(^8^9\) Kwan identifies the heavy reliance on vision and visualisation as an important means of knowledge production, and highlights the alternative cartographic practices that question or destabilise dominant representations of everyday life.\(^9^0\) The visualisation tradition of GIS thus represents a fundamental means of feminist and subjective production of knowledge, complimenting well the theoretical and methodological framework time-space geography.

In terms of the actual GIS mapping techniques of feministic research, Kwan recommends an integration of qualitative methodologies such as in-depth interviews to source the data visualised in the maps, as well as complimenting the illustrations with additional contextual information that describes experiences.\(^9^1\) Giving specific attention to the fine spatial scales of the everyday lives of women and marginalised communities is the essential feature. To give an example, Kwan conducted a critical GIS investigation into the post-September 11 events in New York as experienced by Muslim women, employing oral histories and visual narratives in order to illuminate the impact of anti-Muslim hate violence on the daily lives of Muslim women and help to articulate their emotional geographies in the post-September 11 period.\(^9^2\) The integration of in-depth interviews and oral histories can thus be visualised in a captivating manner through a qualitative, feminist application of GIS.

\(^{8^4}\) Kwan, Mo-Pei. ‘Feminist Visualisation’ 2002.
\(^{8^5}\) Ibid, 2002.
\(^{8^6}\) Ibid, 2002.
\(^{8^7}\) Ibid, 2002.
\(^{8^8}\) Haraway, Donna. ‘Situated Knowledges’ 1988.
\(^{9^0}\) Kwan, Mo-Pei. ‘Feminist Visualisation’ 2002.
\(^{9^1}\) Ibid, 2002.
\(^{9^2}\) Kwan, Mo-Pei. ‘From oral histories to visual narratives: re-presenting the post-September 11 experiences of the Muslim women in the USA.’ Social and Cultural Geography. 9 (6). 2008.
The methodological praxis of space-time geography is one such qualitative method that lends well to an integration with GIS in order to examine the intricacies of daily mobility and accessibility: Talia McCray and Nicole Brais visualise the diverse constraints to daily transportation accessibility experienced by low-income women in Quebec using a combination of feminist GIS and qualitative time-geography methods, whilst Kwan herself has long merged the two methodologies to investigate and measure gendered accessibility to urban opportunities in diverse geographic locations across Ohio, USA.\textsuperscript{93} For this last study, Kwan concluded that \textit{“GIS-based space-time measures are more sensitive to women’s life-situations when compared to conventional measures, and that conventional accessibility measures suffer from an inherent gender bias and therefore are not suitable for studying women’s accessibility”}.\textsuperscript{94} Such a synthesis of theoretical tools and methodologies – qualitative space-time geography integrated within a feminist application of GIS – bears particular relevance to the study of gendered daily mobilities of women in Rosengård and have been proven to enable a socially-sensitive, bottom-up, feminist production of knowledge. It has thus inspired the research design of this current study, as is detailed further in the methodological chapter. Overall, the theoretical background and toolkit that have been discussed throughout this chapter provide a thorough, nuanced understanding of the subsequent methodological and analytical choices pursued in this study to respond to the overriding research questions of the thesis.

\hspace{1cm} \textsuperscript{93} McCray, Talia., Brais, Nicole. \textit{‘Exploring the Role of Transportation in Fostering Social Exclusion’} 2007.

\hspace{1cm} \textsuperscript{94} Kwan, Mo-Pei. \textit{‘Gender and Individual Access to Urban Opportunities’}. 1999.
4. Methodology and method

In this chapter I will discuss the methodological background and reflections to the research, detailing the methods that have been used to collect, present and analyse the travel data material. The research design will be presented and defended, as will the suitability of such methods to answer the overriding research questions of the study. Overall the study employs a qualitative methodology that has been complimented with the use of critical GIS (geographic information systems) to visualise the analysis. In light of examining gendered mobilities, this research pursues a critical, feminist approach throughout that I will explore in this chapter.

4.1. Methodological Reflections

4.1.1. Feminist Methodology

In order to investigate the daily mobilities of women in Rosengård, I have chosen to adopt a feminist methodological framework. Before detailing the critical, feminist methods to be incorporated in this study, it is first necessary to respond to the question: what specifically makes research feminist? Ramazanoğlu and Holland posit that there is no universal definition of what constitutes feminist research: it is not merely the study of gendered phenomena that makes research feminist. 95 However, a feminist methodological perspective can largely be recognised by its sensitive approach to gender and power, their critique of normative frameworks and thus the application of similarly appropriate theoretical and methodological tools with the same considerations.

The production of knowledge represents a central tenet of feminist research. From a critique of ‘authoritarian knowledge’ that highlights the relationship between societal positions of power and knowledge, feminist research asserts that all knowledge is humanly produced and thus subject to bias: different individuals produce different kinds of knowledges, and thus the knowledge that usually prevails in traditional research is that belonging to social positions of power and privilege. 96 With regard to perspectives of feminist geography, Bondi and Davidson argue that this research highlights how power manifests itself through space, and thus how spaces and places are experienced differently by different people. 97 Looking closer then at mobility and transportation, we can here reflect on the pervasiveness of travel data surveys that claim to present the ‘objective truth’ about travel behaviour. It is this privileged perspective of power that I hope to counter with this feminist research into gendered mobilities.

With this in mind, it is critical to employ both theoretical and methodological tools that enable a feminist analytical research: the practice of space-time geography represents one such tool that will play a critical role in this study. Since contemporary feminist researchers have reclaimed the practice by applying an intricate, bottom-up attention to the temporal experiences of everyday life of women and those social groups and communities experiencing

95 Ramazanoğlu, Caroline. and Holland, Janet. Feminist Methodology, 2002.
vulnerability and marginalisation, the toolbox of space-time geography articulates the feminist project of clarifying power relations in society and how they contribute to spatial-temporal arrangements, determining who controls space and whose time is valued. Ultimately, Scholten et al summarise the benefits of a feminist application of space-time geography insofar as it:

“gives the possibility to visualise constraints, dominant projects and individual reach by creating images of the everyday struggles between activities, decision-making, hindrances and intervening policies from an individual perspective and at a local geographical level”.

4.2. Research Design

In order to effectively respond to the overriding research questions of this project, I have pursued an exploratory, qualitative investigation into the gendered experiences of daily mobilities amongst women living and working in Rosengård. Founded upon a theoretical background of mobility and transportation justice, I have called upon the field of space-time geography as a methodological toolkit in order to both collect my dataset results, and later frame the analysis of this material. The collection of five travel diaries of women living and working in Rosengård provides the primary source data used in this research. To compliment the presentation and analysis of these results, and to draw upon the visual tradition of space-time geography, I have employed a feminist application of GIS to visualise the diverse spatial and temporal mobilities of the women participating in this study. Such qualitative methods serve to illustrate the role of public transportation in Rosengård as well as the potential barriers to mobility and accessibility that these women encounter in their daily lives. To quote Scholten et al, “time-geography is an approach with several sets of useful concepts that describe and analyse women’s everyday struggles and possibilities in an era in which mobility and transport have become undisputed factors of everyday life”. As such, the collected and analysed travel data material will respond efficiently to the primary research topics of this study: the complexity of daily travel activities of women in Rosengård; the multiplicity of restrictions that they face whilst travelling; and finally, the impact of the new train station on accessibilities within Malmö. This following sub-chapter will outline the research design and methodological process in greater detail.

4.3. Travel Itineraries visualised through Qualitative GIS

4.3.1. Data collection: in-depth interviews and travel diaries

The observation of intricate daily movements, behaviours and responsibilities of women is a particularly private and sensitive task, and one that necessitates an accordingly sensitive research method. Earning the trust of the participating women was thus an essential factor.

of this study. The main source of primary source data material was collected through a set of in-depth semi-structured interviews with five participants (self-identifying as women) that enabled a completion of five travel itinerary diaries detailing their daily travels within Rosengård over the course one average sample day. The interviews and travel diaries together produced five itineraries across time and space, as well as an accompanying set of reflections regarding their gendered experiences of mobility: issues such as modal choice, accessibility, sense of safety, desired destinations and experience of comfort/ease/convenience.

The application of in-depth interviews with participants is an oft-preferred method in feminist research method as it allows for the exploration of lived experiences and voices of marginalised communities, enabling a queering of the relationship power dynamic between researcher and participant.\textsuperscript{101} Though having acknowledged that no research method can be intrinsically and universally applied as feminist, I believe that in-depth interviews and travel itinerary diaries are most appropriate for this particular study in observing, visualising and analysing the intricacies of daily mobilities. In order to capture the complexity of travel behaviours and movements of the participating women specifically, I have drawn upon the central tenet of time-space geography and employed travel itinerary diaries. Kajsa Ellegård posits the suitability of the concept of ‘daily activity programs’ to measure the opportunities that people with different means of transportation have to fulfil them.\textsuperscript{102} The seminal work of Mei-Po Kwan defends the use of ‘activity diary surveys’ as a means to capture and reflect individual experiences of mobility, and seldom engages with aggregate data or conventional administrative datasets: focusing on very fine spatial scales, Kwan has implements these methods throughout her canonical research into feminist applications of time-geography and accessibility.\textsuperscript{103} The final support for the suitability of travel diaries comes from Scholten et al:

\begin{quote}
Aspects like when, where and with whom the activities are performed are important and, depending on the purpose of a study, other aspects can be added. It is vital to relate data concerning such aspects of daily life to each other in order to understand their complexity, and to interpret the couplings between activities, between persons and between persons and resources.\textsuperscript{104}
\end{quote}

With regard to this study then, I conducted five one-on-one interviews with each of the participants individually at different locations in Malmö. Having preliminarily secured the consent to collect and use the data sourced from their interviews and information, I first of all enquired into the background and basic information of each of the participating women. Subsequently, I asked them a set of simple questions relating to their experiences of mobility and transport in Rosengård. The topics can be summarised as below:

\begin{enumerate}
\item Ramazanoğlu, Caroline. and Holland, Janet. Feminist Methodology, 2002.
\item Ellegård, Kajsa. Thinking Time Geography. Routledge, 2018.
\item Kwan, Mo-Pei. ‘Feminist Visualisation’. 2002.
\item Scholten, Christina Lindkvist., Friberg, Tora., Sanden, Annika. ‘Re-Reading Time-Geography from a Gender Perspective: 2012.
\end{enumerate}
• How are you using the public transportation system in Malmö?

• Have you taken the train from Rosengård train station, and if not, why not?

• Perceptions of personal safety while travelling during the day and night?

• Places in Malmö you would like to access/visit but are unable or deterred?

• Places visited on a regular/occasional basis?

Due to the semi-structured nature of the interviews, I pursued each of these topics with fluidity and allowed for the conversation and perspective of the participant to guide the discussion. There were times when interesting and relevant insights emerged instinctively so the flexibility of the interviews allowed me to dynamically engage with this material. Following this initial reflection on mobility and transportation experiences, the participant and myself together completed the travel diary table that I had created, taking inspiration from the works of Scholten et al.105 An example of the travel diary table used can be found below in figure 1, with the data collected from the participant Fatima. The variables included in the data collection are: the time of each activity; the activity itself; the location of activity; the mode of transport used; the time taken to fulfil each activity; the accompaniment of activity; and finally, some comments on each activity. The travel diary captured the activities and movements of the women on an average weekday, from morning till evening. It is worthy to note here the approximation aspect of the diaries: the distances and times detailed in the diaries do not claim to represent completely accurate and precise statistics, but an approximate portrayal as detailed to the best of the participants’ ability in order to present an overall image of the daily activities. The participating women recounted their various travels, modal choices, household and employment responsibilities, and the constraints they encountered throughout the day. The synthesis of these reflections and the travel itinerary diaries thus provide a nuanced, holistic insight into experiences of daily mobility of women in Rosengård, and therefore contribute towards answering the overriding research questions of this thesis.

The duration of each interview session ranged from 45-60 minutes and were conducted in semi-private venues that the participants had chosen themselves and were familiar with. The interviews were conducted in English, which suited myself and the participants appropriately. The interviews were carried out in the Spring 2019.

In line with the exploratory, qualitative nature of this research, I have chosen to focus my investigation on the experiences of five participating women. This enables me to collect five bottom-up, in-depth, and intimate insights into daily mobilities. This is in opposition to a data collection featuring a large number of participants that are treated as mere numbers and ‘data’ within the analysis. Harking back to the key tenets of feminist research and knowledge production that permeate this research, the opportunity for the participating women to partake and contribute to their own production of knowledge was of particular importance, and thus suited to the more concise participant number. As stated before, the observation of intricate daily movements, behaviours and responsibilities of women is a particularly private and sensitive task: earning the trust of the participants was a critical task. This was also possible given the smaller participant number. Additionally, given the temporal and resource constraints of this Master’s thesis, the focus on five participants enabled an achievable and realistic task through which to investigate my overriding research questions. Of course, one could claim the limitation of investigating only five participants is that the results do not
provide a representative, quantitative and ‘truthful’ depiction of women’s use of public transportation in the city. However, at no point in this project does this research claim to be fully representative of women in Rosengård nor to produce generalisable results: such a task is beyond the limits of this project, and does not help in responding to the purpose of the research.

As for sampling choices, the only requirement was that the individuals either resided, worked, or spent a considerable amount of time in Rosengård, thus having experiences of mobility and public transportation in the district, and particular interests in the new Rosengård train station. Following the feminist traditions of research, I rejected a binary, exclusive definition of gender by allowing the participants to self-define as women. There were no age restrictions as I felt a broad, inclusive participant sample would be fruitful to the investigation. As such, the participants of this research constitute five individuals who all self-identify as women. The ages of the women range from 25 to 32 years, and all but one individual live in Rosengård. All of the participants are able-bodied persons who experience no overt incapability in their daily mobility; only one of the women has children (although Gloria often travels with her babysitting children); and all are either recent or longer-term immigrants to Sweden. All but two of the participants are single and live alone in or in close proximity to Rosengård, and they mostly travel unaccompanied. None of them drive and only two has access to a car. The five women have been selected to participate as they either reside, work or study in Rosengård, and thus pursue mobility in and around the area targeted by Rosengård train station and the new rail service. I have anonymised the first names of the participants for the sake of their privacy, security and well-being. As for the daily mobilities captured by the travel diaries, I chose to focus on the average weekday of the participants as more representative of the diverse gendered differences of mobility as compared to the standard 9-5 workday commute most prevalent amidst official transport survey data.

In terms of gaining access to the participants, there was two central means of meeting the desired individuals suitable for this study. Firstly, three of the participants – Fatima, Zeinab and Gloria – I encountered at the community centre Vänskapsföreningen in central Rosengård. Zeinab is employed full-time as a language teacher the centre, while Fatima and Gloria attend on an occasional basis for particular events. I found this process of gaining access relatively straightforward, fast and enjoyable as I had already formed acquaintances there in previous research projects: earlier in this Master’s programme myself and my classmates conducted a project on community engagement and the retention of ‘local knowledge’ within urban development consultation processes. The tenets of this research manifested themselves in this current study, as I was able to access and communicate in a comfortable manner with potential participants, building on the trust that I had developed a year previous. The remaining two participants – Olivia and Juliet – are both students of Malmö University and I was able to engage with them at the Rosengård student housing accommodation. Understanding the research process, they were both more than comfortable in helping to participate in the study. The process of gaining access here was different to that at Vänskapsföreningen, as myself and the participants felt more as equals with all of us being students, yet it was equally straightforward to earn the trust and understanding enough to conduct the research methods.
4.3.3. GIS visualisation

The material collected throughout the travel diaries and the accompanying reflective interviews have been digitalised and geocoded into GIS visualisations following a tradition of critical and feminist GIS. This has been done to contribute to the analytical process and to provide a visual aid with the intention of understanding complex power relations and different individuals’ experiences of space and mobility. As for the GIS mapping techniques of feminist research, Kwan recommends an integration of qualitative methodologies such as in-depth interviews to source the data visualised in the maps, as well as complimenting the illustrations with additional contextual information that describes experiences. The visualisation tradition of GIS thus represents a fundamental means of feminist and subjective production of knowledge, complimenting well the theoretical framework time-space geography used in this research.

I have produced six maps in total: five of which visualise each of the participants’ daily travel itineraries and one final map to illustrate the comparative spatial reaches and ‘radiuses of actions’ of the participating women. As mapping software, I have employed QGIS to produce my maps and have relied on a dataset package of Skåne County provided by the Lantmäteriet database and Malmö University. In the tradition of qualitative GIS, I have edited the maps to incorporate added detail and reflection based on the participants’ experiences which serves to compliment the visual interpretation of their mobilities.

For each of the daily itinerary maps, I have created individual vector shapefiles for each of the destinations detailed in the participants’ travel diaries using their XY coordinates, and then created itinerary path lines to connect the destinations and to present the actual journeys travelled, colour-coded by transport modal choice. For the final analytical map, I have gone further by implementing a spatial polygon buffer for each of the itinerary paths in order to visualise each participants’ spatial reach or ‘radius of action’. Each spatial circumference has been formed by a buffer of 400 metres surrounding the itinerary path to indicate additional walkability accessibilities possible throughout each travel path, based on universal judgements regarding the maximum distance required to enable mobility by foot. This enables a visual analysis of the spatial overlap of mobilities, and problematises the diversity of social positioning of the individual in relation to their movements in time and space.

4.4. Limitations

4.4.1. Sample size

There are a number of limitations to this research. As previously discussed, the sample size of participants is relatively small at just five participating women. One could argue that such a number does not sufficiently offer a reliable source of primary source data with which to effectively respond to the overriding research questions and examine the wealth of transport and mobility patterns of women in Rosengård. This sample size choice has been defended.

108 Lantmäteriet database, 2017 ©
with reference to the study’s feminist methodological stance, preferring to focus on fewer participants with a bottom-up, in-depth, and intimate insights into daily mobilities and the subsequent analysis and visualisation of these mobilities in an exploratory manner. Additionally, given the temporal and resource constraints of this Master’s thesis, the focus on five participants enabled an achievable and realistic task. However, the limitation remains that this research engages with only a sample selection of a largely heterogeneous social group. As such, I do not claim the results of the study to be fully representative of women in Rosengård nor to produce generalisable results: such a task is beyond the limits of this project, and does not help in responding to the purpose of the research.

### 4.4.2. Positionality, reflexivity and bias

In accordance with the feminist methodological foundation of this research, I am conscious of the power relations and exercise of power between researcher and participant.\(^{109}\) A consideration of reflexivity is thus essential to understanding one’s own impact and involvement within the research process, and the subsequent potential for bias or a predisposition concerning the results. With regard to issues of reflexivity and positionality, I make reference to the prior study of Elina Lindeborg who similarly conducted a feminist exploration of gendered spatial realities in Rosengård.\(^{110}\) As a self-identified middle-class student researcher interviewing young teenage women in the district, Lindeborg identifies the substantial difference in social position between herself and her participants, to which she reflects upon such limitations and considers throughout the analysis of her material. In a similar fashion, I recognise the power accorded to my own privileged positionality within socio-cultural hierarchies as a young, mobile, middle-class student researcher and thus identified the potential this positionality had on the collection of my data material and the ensuing interpretation of research findings. As such, throughout the in-depth interviews and collection of travel diaries, I was conscious of the power dynamic between researcher and participant, and thus made efforts to establish a comfortable, considerate and neutral setting to the sessions.

As discussed earlier in the chapter, the feminist notion of knowledge production considers all knowledge to be ‘situated’ and subjective insofar as it originates from an individual and subjective interpretation process - often from those within positions of power and privilege.\(^{111}\) I thereby identify a potential limitation within this research insofar as I have interpreted the data collection, analysis and visualisation processes according to my own situated interpretations, which could differ from those of the participants. I am also aware of my predisposition against the Rosengård train station and its ability to extend mobility opportunities in the district, and thus the potential for unintended bias throughout this research process. I therefore made an effort to negate my own bias towards the train station and neutralise the interviews with the participating women, being open to positive experiences and reflections of the new railway service.

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5. Analysis

This chapter will present the results from the travel data research and then enter into a discussion analysing these results. Firstly, there will be a presentation of the results with a brief description of the daily travel itineraries of the five participants that have been collected through the use of space-time travel diaries. These summaries will be accompanied by the GIS maps I have produced in order to visualise the results and critically examine the mobility patterns of these women. Subsequently, we will enter into a discussion of thematic analysis, centred around three main factors that have emerged from both the collected research material and the overarching theoretical framework. Synthesising the mobility patterns of the five participants, these themes express both the temporal and spatial considerations of mobility – service infrequency, off-peak activity schedules and spatial reach to opportunity – as well as considerations of transport-related social exclusion.

As introduced in the methods chapter, the background to the participant’s travel patterns have been framed through a number of questions concerning general mobility, such as issues of modal choice, accessibility, sense of safety, desired destinations and experience of comfort, ease and convenience. All five of the participants are able-bodied persons who identify as women, and experience no overt incapability in their daily mobility; only one of the women has children (although Gloria often travels with her babysitting children); and all are either recent or longer-term immigrants to Sweden. All but two of the participants are single and live alone in or in close proximity to Rosengård, and they mostly travel unaccompanied. None of them drive and only two has access to a car. The five women have been selected to participate as they either reside, work or study in Rosengård, and thus pursue mobility in and around the area targeted by Rosengård train station and the new rail service. This is as a result of a random sample selection of participants previously discussed in the methodology chapter, in order to produce natural and unbiased results and look at gendered mobility. To reiterate, the daily travel diaries present the movements of the participants on an average weekday. It must be noted that all locations and travel durations/times are approximations and thus do not claim to be completely accurate, aiming to visualise a general picture of mobility over the course of one day. The participants have all given consent to the use, visualisation and analysis of their travel data. I have changed names for anonymity and participant welfare and security.

5.1. Travel Diary Itineraries

5.1.1. Olivia

Olivia is a 25-year-old student from Saudi Arabia who has been living in Malmö for 8 months. She lives alone in Rosengård student house and studies at Malmö University. Her main mode of transport is the bus: she relies on bus no. 5 and 35 in her daily travels to and from Rosengård. She has never taken the train in Malmö and was not even aware of the new train station in Rosengård, which is quite far from her student accommodation (around a 25-minute walk). Having never taken the train, she said she would consider taking the train to visit a friend in Limhamn, as the bus takes a long time. She does not cycle as she does not own a bike nor has she learnt to ride a bike: women traditionally have restricted if not forbidden
access to cycling and driving in Saudi Arabia. She expresses concern at the idea of cycling in the bad weather, noting also how her clothing (skirts, dresses) would be impractical with this transport mode. She mostly travels unaccompanied apart from on weekends when she might share the bus journey with friends – they will always socialise in more central Malmö near Möllevången or Triangeln and never in Rosengård. Olivia claims to always feel safe during her daily travels and has never experienced any threatening behaviour or situations, despite many people previously warning her of the potential dangers. Overall, Olivia expresses a **dependence on the bus** lines in Malmö and the **potential restriction** this leads to, claiming she has ‘no other option’. Due to the fact she is relatively new in Malmö, she is unfamiliar with locations and activities outside of her usual bus routes (i.e. areas such as Värnhem, Västra Hamnen, wider Skåne) and does not think about travelling to new different places. She would also appreciate more regular services on her usual bus lines. Olivia recounts several occasions when this reliance on the bus has resulted in **various constraints**: being late for job interviews due to a late bus; having to wait for the next bus as the first had reached maximum capacity; and not attending her weekly dance class in Sofielund (Dansakademi) as the journey by bus simply **takes too long**, adding to the time-related stress she also experiences with her university studies (25 minutes by bus, this journey takes a mere 8 minutes by bike, and yet cycling is unfortunately not an option for Olivia).

Below presents the daily mobility of Olivia on an average weekday. She leaves home at 09:30 in the morning and walks 8 minutes to Ramels Väg bus stop to catch the no. 5 bus to university in central Malmö (Anna Linds plats), taking 22 minutes. She stays for her university lectures then in the early afternoon she leaves university to make her way home. She goes to buy groceries on her way home, choosing to shop at Netto in Södervärn as it is cheaper than other supermarkets. Taking bus 5 to Studentgatan (9 mins) and then walking to Gustav Adolf Torg (5 mins) to transfer onto bus no. 35 which takes her to Södervärn (9 mins), she then walks 2 minutes to Netto to shop. As she finishes and walks back to Södervärn to catch the bus home, she often waits to find a bus that is not overcrowded – she tends to have shopping bags with her which are heavy and require more space on the bus than usual. By this time it is 15:00 and the buses are very busy. She notices that everyone enters the bus at Södervärn and will later exit in Rosengård. She takes bus no. 35 back to Kryddgården (22 mins) in Rosengård and walks back to the student housing. She usually remains at home to study the rest of the day.
1. Olivia Travel Itinerary

Legend
- Green: Destinations
- Blue: Railway
- Red: Walking
- Black: Bus

Olivia leaves home at 09:30 in the morning and walks 8 minutes to Ramels Väg bus stop to catch the no. 3 bus to university, taking 22 minutes.

After lunch at university she goes to buy groceries on her way home, choosing to shop at Netto in Södermalm as it is cheaper than other supermarkets.

She finishes shopping at 15:00 and the buses are very busy. She waits to find a bus that is not overcrowded – she tends to have shopping bags with her which are heavy and require more space on the bus than usual.

She returns home at around 15:30 and stays at home to study for the rest of the evening.

Figures 5 (a, b). Travel Itineraries for Olivia
Produced by Kate Flowerday, 2019.
5.1.2. Juliet

Juliet is an 28-year-old student from Italy who has been living in Malmö for 18 months. She lives in Rosengård student house and studies a masters programme at Malmö University. Her main mode of transport is by bike and is able to cycle mostly everywhere in Malmö. For her, there is no option in transport modes that offers her that same amount of flexibility and accessibility. She does have to take the bus on the rare occasion that her bike is broken, or if she is in central Malmö without bike for some reason. She will also occasionally take a bus to access areas of nature in greater Skåne such as Sturup. She has never taken the train from Rosengård train station, and does not think she will: due to the irregular schedule of the train (one train every 30 minutes), it is always easier and quicker to take her bike. She notes that she does not choose to cycle because it is necessarily healthier as a form of exercise, but mainly as it is the most efficient means of transportation in Malmö for her. Juliet is employed part-time in a bar in Caroli (central Malmö) and works most weekday evenings: she normally finishes work at 02:00 in the morning when there are no more buses running and would feel extremely restricted if she did not cycle. However, she does express some difficulties with relying on bike as her principle means of transport: she often gets lost around Rosengård (and the similar-looking miljonprogrammet housing estates) as she is unable to follow her GPS safely whilst cycling; the semi-frequent occasions in which her bike breaks or needs repairing because it is not of particularly good quality (she is unable to afford a reliable, ‘good’ bike) can leave her stranded; and, despite the inexpensive nature of her bike, the constant fear that her bike will be stolen. She does, however, feel extremely safe both in Rosengård and central Malmö. Whilst cycling she feels that no one can approach her, and that she can ‘escape’ from situations quickly if she needs to: Juliet has also been warned to be careful travelling around both Rosengård and Malmö. Critically, Juliet recognises that she does not spend hardly any time in Rosengård, and only in Rosengård to sleep. Most of her friends and partner live in central Malmö and so that is where she socialises. As evident in her travel diary, she will never usually return home at any point during the day/evening due to the perceived distance, even if she admits that it doesn’t actually take so long to cycle home (20 mins). She will also sometimes stay at her partner’s home if it is the easier and closer-proximity option. Overall, Juliet feels very comfortable with her accessibility and mobility-by-bike in Malmö and does not wish for any further extension of public transport in the area as it does not concern her. Nevertheless, she does admit that her job and its unsocial/off-peak work hours would be unsustainable if she could not for some reason cycle and had to rely on public transportation, recognising the potential for inaccessibility and restriction.

Below presents the daily mobility of Juliet on an average weekday. She leaves her student accommodation at 11:30 in the morning and cycles to university in central Malmö (20 mins). On the way she stops for coffee in Möllevången (10 mins) and then continues to university (10 mins). She studies at university until 16:00 at which time she cycles to her workplace in Caroli (5 mins), and waits for her shift to being at 17:00: there is no option to return home before work as the bike journey is deemed too long/far. Juliet works until 02:00 and then
cycles home, and often stops to get a coffee at a bakery that is open at this time in Möllevången on the way home.

2. Juliet Travel Itinerary

Legend
- Destinations
- Railway
- Modal Choice:
  - Bicycle

![Map of Juliet's travel itinerary]

- **University**
- **Bar**
- **Bakery**
- **Cafe**
- **Student Housing**

**Day Starts:** Juliet leaves home at 11:30 in the morning and cycles to university, taking 20 minutes. She stops to get a coffee on the way.

- She studies at university until 16:30, then she cycles to the bar she works at. Her shift starts at 17:00 so she waits at the bar before her shift.
- She finishes work at around 02:00 in the morning, and then cycles home, stopping for a coffee at a bakery in Möllevången on the way home. There are no buses back to Rosengård at this time, so cycling is her only modal option. Cycling home late at night she always feels safe.

Figures 6 (a, b). Travel Itineraries for Juliet
Produced by Kate Flowerday, 2019.
Fatima is a 32-year-old woman from Syria who has been living in Malmö for 4 years. She lives in central Rosengård with her husband and two children (an 8-year-old and a 2-year-old). In her household, it is Fatima who takes prime responsibility of the children and household responsibilities whilst her husband is full-time employed and commutes to his job in Värnhem every day. Her main mode of transport is walking, though she does take the bus occasionally if she needs to travel to central Malmö. She has never taken the train from Rosengård train station and does not think she currently has any need for it. Neither does she cycle – she explains how she is unable to ride a bike, yet even if she could, she often travels with her young children so would be unable to cycle with them. She also thinks cycling would be difficult with her choice of clothing (Fatima gestures to her hijab). Fatima’s household has a car yet she does not drive as she does not have a driving license: it is her husband that drives the car on weekends when the whole family is traveling, and sometimes during the week, though he usually cycles to work. Fatima has family who live in Dalby so sometimes on the weekend they will take the car and visit. Her regular destinations in Rosengård include her son’s primary school, the City Gross supermarket in Centrum and Rosengård library. She also attends the community centre at Vänkapsföreningen quite regularly to meet friends, attend lectures and various activities while her oldest son is at school. She walks to most of these places and is happy to walk, unless the weather is bad in which case she tries prefers not to leave her home if possible. Fatima does feel very safe walking around Rosengård during the daytime she prefers not to travel on her own or with her children as she has heard stories of teenage boys and gangs causing trouble. Despite this, she has never experienced any threatening situations herself. Overall, Fatima feels content with her means of transportation and mobility but admits that she leaves Rosengård very seldom during the week when her husband is at work. She explains that she is very busy during the weekday looking after her children and does not have time or much reason to leave Rosengård.

Below presents the daily mobility of Fatima on an average weekday. She wakes up at 07:00 to make breakfast and prepare her children for the day. She leaves her home in central Rosengård at 08:00 to take her eldest son to school, taking her baby daughter in a pram. They walk to Rosengårdsskolan and it takes around 10 minutes. After dropping off her son, she walks with her daughter to Rosengård Centrum (10 mins) to do some grocery shopping at City Gross – she likes this store as it has plenty of space to walk with her pram and also has cheap groceries. She looks round the shops a little and then walks back home at around 09:20 with heavy shopping bags that she stores in the pram (15 mins). Returning home, Fatima spends a few hours putting her daughter down for a nap and prepares lunch. At 14:15 she once again walks with her daughter to the school to pick up her son (10 mins). From there they walk to a local playpark Vattenlekplatsen that her son enjoys because his friends also go there – they go because it is near the school and Fatima likes her son to play outside. After 45 minutes they return home by foot (9 mins) and stay at home all afternoon. She has many things to like laundry, cleaning the house and helping her son with his reading. They stay at home until 21:00 (sunset) when the Fatima’s husband drives the whole family to the community centre at Vänkapsföreningen (6 mins) to break their fast and eat with friends, as they have been observing Ramadan this month as a Muslim family. They stay for one hour and then drive back home.
3. Fatima Travel Itinerary

**Legend**
- Destination
- Railway

**Modal Choice:**
- Car
- Walking

**DAY STARTS:**
Fatima wakes up at 07:00 to make breakfast for her family. She leaves the house at 08:00 to take her son to school, taking 10 minutes. She also brings her baby daughter in a pram.

They walk back home at 09:30 and Fatima spends a few hours putting her baby down for a nap and preparing lunch. At 14:15 they walk back to the school to pick up her son. They walk to the playpark together and spend about 45 minutes playing there. They then walk home, taking 9 minutes.

In the evening, they stay at home until 21:00 when the family go to break their fast at the community centre Vänskapföreningen. Fatima’s husband drives the family in their car, as Fatima cannot drive, taking 6 minutes. After an hour, they return home.

She then walks with her baby to Rosengård Centrum to buy groceries, taking 10 minutes. She enjoys doing her shopping here as there is plenty of space to walk with the pram.

Figures 7. (a, b). Travel Itineraries for Fatima
Produced by Kate Flowerday, 2019.
5.1.4. Zeinab

Zeinab is a 32-year-old teacher from Lebanon who has been living in Malmö for 3 years. She lives in Hyllie with her husband and works in Rosengård as a Swedish language teacher at the community centre Vänskapsföreningen. She also attends daily evening classes in professional Swedish in Värnhem during the weekdays. Living within a 5-minute walk from Hyllie train station (a direct stop on the pendulum railway line connecting Rosengård to Central station), it seems Zeinab would be an ideal candidate for the new train service in the area. The train journey would take 11 minutes between stations, plus a 12-minute walk from Rosengård station to workplace, whilst by bus the journey takes 32 minutes, plus walk: the train would hereby shorten Zeinab’s overall trip time by 20 minutes. Attracted by this, she has recently begun to take the train occasionally in the mornings to get to work, but ultimately still finds the service too irregular (every 30 mins) and does not synchronise efficiently with her schedule, despite the train station being so close in proximity to her apartment. Starting work at 08:30, by taking the train in the morning she either arrives 29 minutes early to work (with the earlier 07:37 train) or 2 minutes too late (with the later 08:07 train); this might sound passable and the latter option appropriate however, arriving late every day (even by just a few minutes) is not something she wants or is able to do. Rather, she prefers to take one of several buses (no. 33) leaving Hyllie at 07:45 and spends the time reading and relaxing before work, arriving 5 minutes early. Needless to say, the minutia of planning one’s commute to work is clearly an important one in which every minute counts. Outside of work, with her busy work and study schedule she does not have during the week to do grocery shopping so walks to Emporia in Hyllie at the weekends. She doesn’t spend so much free time in Malmö, as her family live in Copenhagen, so she often rides in a car to Denmark with her husband at weekends (her husband drives but she has no driving license). Zeinab, like the other participants, also articulated feelings of safety when travelling in Hyllie, Rosengård and Malmö. Overall, Zeinab expressed feelings of contentment with her experience of the public transport system in Malmö as it seems to be responding well to her diverse spatial and temporal requirements however, seeing as Zeinab does represent a resident who would particularly benefit from the transit-orientated development from Hyllie direct to Rosengård, it is interesting that she is not as favourable of the service as expected: the irregularity of the service emerges as significant issue and as a barrier to its efficiency in extending accessibility in the area.

Below presents the daily mobility of Zeinab on an average weekday. She leaves her home at 07:30 in the morning and takes bus no. 33 leaving Hyllie at 07:45, spending the 32-minute commute reading and relaxing before work. She walks from the bus/train station to work at community centre Vänskapsföreningen which takes 12 minutes. Zeinab works from 08:30 until 16:40, at which time she walks back to Rosengård station to catch bus no. 33 to Värnhem (11 mins), then walking 5 minutes to Värnhemsskolan for her evening Swedish language classes from 17:30 – 20:30. After her class, she walks back to Värnhem and catches bus no. 6 to Triangeln (7 mins), then takes either the pågatågen or öresundståg back to home to Hyllie (4 mins).
4. Zeinab Travel Itinerary

Legend
- Green: Destinations
- Blue: Railway

Modal Choice:
- Black: Bus
- Orange: Train
- Red: Walking

Zeinab finishes work at 16:30 and then walks back to Rosengård station to catch bus no. 33 to Värnhem taking 11 minutes. She then walks 5 minutes to Värnheimsskolan for her evening Swedish language classes from 17:30 – 20:30

DAY STARTS:
Zeinab leaves home at 07:30 in the morning and takes the bus no. 33 to Rosengård, taking 32 minutes. She prefers the longer bus journey to the train, spending the time reading and relaxing before work.

After her Swedish class Zeinab returns home. She walks back to Värnhem and catches bus no. 6 to Triangeln (7 mins), then takes either the pågatågen or öresundsrap back to home to Hyllie (8 mins). She is tired at this point so chooses the quickest journey.

Figures 8. (a, b). Travel Itineraries for Zeinab
Produced by Kate Flowerday, 2019.
5.1.5. Gloria

Gloria is a 29-year-old woman from Turkey who has been living in Malmö for 6 years. Having recently graduated from Malmö University, Gloria is looking for further employment in Malmö and currently works part-time as a childminder for two families in the city. She lives alone in central Rosengård near the Bennets Bazaar development. Her principle mode of transport is bicycle and relies upon cycling to get across Malmö. Gloria highlights the importance of conveniency as the main factor in her modal choice and travel behaviour in her daily mobility. She has previously lived in more congested, densified cities where she regularly took the public transport system that provided very frequent services; she finds the services too irregular and inconvenient in Malmö to be able to comfortably depend upon it. She has taken the train from Rosengård station two times and did enjoy the fast service to Central station, but ultimately does not use it regularly due to the infrequent departure times that do not synchronise with her daily routines. She says that each time she checks her phone for the best travel itinerary both leaving and returning to Rosengård, there is never a suitable train connection. She reiterates that everything is easier by bike. Additionally, Gloria explains that she feels far safer from potential harassment being ‘mobile’ cycling rather than waiting for a bus (that you are unsure will arrive punctually) and remaining ‘stationary’, especially during the dark evening hours. Irregardless, Gloria claims to feel safe whilst travelling by bus and bike in both Rosengård and Malmö. Talking of perceived distance, Gloria shares the same sentiment as Juliet insofar as once she has left home in Rosengård for the day she will not return at any point between studies or job, citing the perception of a substantial distance between central downtown Malmö and Rosengård (even if it is merely a perception). In terms of employment, Gloria does express some difficulties concerning mobility while working as a childminder. The main family she works for resides in Limhamn in the western outskirts of Malmö, quite far from Rosengård and inaccessible for Gloria by bike. Having to pick up the two children from school, taking them to after-school activities and returning home requires Gloria to take the bus with the children, as the distances are too long to walk and she cannot take them by bicycle (especially in winter when the weather is poor). Both of the families have offered Gloria access to a car and would prefer her to drive with the children, but Gloria’s foreign driving license from Turkey is not valid in Sweden, so she is unable to take up the convenient offer of a car to help her with her job. Overall, Gloria relies upon cycling as her principle means of transportation yet does use the bus system quite regularly as required by her part-time job as a childminder working in the outskirts of Malmö. She believes she would use the public transport system in Malmö (bus and train) more often if there were more reliable, frequent services.

Below presents the daily mobility of Gloria on an average weekday. She leaves her home in central Rosengård at 09:45 and cycles to Malmö University to study, read and apply for jobs at the library. Seeing as her bike is in a sub-standard condition this journey usually takes 30 minutes, maybe more if there is a lot of wind. Gloria stays until 13:00 then cycles to meet friends for lunch at a café in Malmö old town (5 mins). She leaves at 14:45 and cycles to the dentist in Södervärn (8 mins) where she has an appointment at 15:00. Afterwards, Gloria must go pick up her the children she cares for from school. She leaves her bike at Södervärn and catches bus no. 3 from Tandvårdshögskolan to Erikslust (10 mins), then changes to bus no. 4 going to Rosenvång (4 mins) in Limhamn. She walks to Geijersskolan (5 mins), picks up
the two children and starts their journey back home. They walk to Limhamn Centrum (10 mins) and catch the no.33 bus to Kalkbrottet (4 mins) then walk home (4 mins). Gloria works with the family until 20:00 and then walks to Bispgatan (16 mins) to take the bus no. 34 back to Södervärn (16 mins) to collect her bike. She then cycles back home to Rosengård taking 9 minutes.

5. Gloria Travel Itinerary

Legend
- Destinations
- Railway
- Modal Choice:
- Bicycle
- Bus
- Walking

Gloria stays until 13:00 then cycles to meet friends for lunch at a café in Malmö old town (5 mins). She leaves at 14:15 and cycles to the dentist in Södervärn (8 mins) where she has an appointment at 15:00.

DAY STARTS: Gloria leaves her home in central Rosengård at 09:45 and cycles to Malmö University to study, read and apply for jobs at the library. Her bike is in a sub-standard condition this journey usually takes 30 minutes, maybe more if there is a lot of wind.

Afterwards, Gloria must go pick up her the children she cares for from school. Leaving her bike at Södervärn, she catches bus no. 3 to Erikstorp (10 mins), then changes to bus no. 4 going to Rosenvång (4 mins) in Limhamn.

She walks to Geijerskolan, picks up the two children and they walk to Limhamn Centrum (10 mins). They then catch the no.33 bus to Kalkbrottet (4 mins) and then walk home.

Gloria works with the family until 20:00 and then walks to Bispgatan (16 mins) to take the bus no. 34 back to Södervärn (16 mins) to collect her bike. She then cycles back home to Rosengård taking 9 minutes.

Figures 9. (a, b). Travel Itineraries for Gloria
Produced by Kate Flowerday, 2019.
5.2. Thematic Analysis

Having looked at the theoretical framework of time-space geography within a surrounding context of mobility justice and the Capability Approach, subsequently employing a feminist methodology of data collection, it is now time to approach the thematic analysis of the data material collected and presented above in the five women’s travel itineraries. Through a feminist application of time-geography and critical GIS visualisations, there have been three key themes that have emerged as particularly significant in the study of gendered daily mobility in Rosengård.

Firstly, the temporal considerations of mobility: the irregularity of key transit service times (both the bus and new train service) surfaced as a common factor, as did the limitations imposed by ‘fixed activities’ in the ‘time budget’ of one’s day, such as employment, studies and raising a family; the diaries also demonstrate the prevalence of off-peak employment/education activities that illustrate mobilities that defy traditional time formulations of the 9-5 commuter transport behaviour.

Secondly, the spatial considerations of mobility: the perception of distance and space in Rosengård featured heavily amongst the participants, as did the restrictions in space and limited accessibility to activities within wider Malmö. The visualisations indicate towards varying levels of spatial reach – or ‘radius of action’ – that interconnects with public transportation usage to determine and exacerbate constraints on individual mobility. This spatial consideration and visualisation contributes to an understanding of social segregation and marginality commonly connotated with residents’ experiences in Rosengård. The spatial reach offered by the new commuter line in Rosengård is also discussed.

Thirdly, and finally, in many ways incorporating the above considerations of mobility, there is the consideration of social exclusion in relation to transportation and accessibility: the travel itineraries shed light on critical issues of social inclusion/exclusion that are heavily interrelated and determined by the quality and availability of public transport resources available throughout Malmö. The participants and their daily mobilities reflect those of diverse social identities and positions, and the feminist methods of this study have sensitively captured the diverse and intersectional power relations behind gendered daily mobilities.

Through the lens of time-geography, I use throughout the analysis the concept of simultaneous constraints (capability, coupling and authority) and considerations that impact upon the mobility and accessibility of my female participants in Rosengård, and paying close attention to the minutia of their travel diaries, how these women interact with the transportation resources made available to them.
5.2.1. Temporal Considerations of Mobility

The first of the analytical themes that emerges from the women’s travel itineraries and reflections on transportation is the temporal considerations of mobility and the restrictions it can enforce on the daily movements of women. Central to this theme is the concept of ‘time-budget’ and recognising time as a valuable resource, borrowing from the thinking of space-time geography: Scholten et al identify that women tend to experience tighter time-budgets as their daily responsibilities straddle both public and domestic spheres, combined with a generally higher modal reliance on public transport, which requires more time than automobility and denotes a certain lack of control over one’s mobility (i.e. the bus is late, a train is cancelled). It is thus suggested that the time of women is less valued and prioritised in transport planning and policy decisions. Thinking about temporal factors of transport, it is not difficult to pinpoint the various constraints — capability, coupling and authority constraints - that impact upon women’s daily mobility, and can be seen in in our case study in Rosengård.

5.2.1.1. Irregularity of public transport services

A factor that featured throughout the majority of the five participants and their travel itineraries was the infrequency of the public transport services when it came to travelling in between Rosengård and Malmö. All but one participant expressed dissatisfaction with service irregularity and suggested it limited not only their use of the service but also their access to activities: they would use the train/bus more if it was more regular. This factor can be interpreted as a coupling constraint of daily mobility, insofar as these women rely on exterior resources, materials, and individuals (the bus, bus driver, bus operations, etc) to achieve their ‘project’, or activity, and thus the infrequent access distributed to such a resource results in limitations. Above all, it was the infrequency of the new train station’s service that garnered the most disapproval: with the train departing Rosengård station every 30 minutes, this was deemed simply too irregular and inconvenient for the participants. Living only a few minutes’ walk from Hyllie train station (only two direct stops before Rosengård on the commuter line) and commuting to Rosengård every day, Zeinab provides a particularly interesting insight. Although considered a prime beneficiary of the new train line, Zeinab still takes the bus to work in the mornings constituting a 44-minute journey, as opposed to the 23-minute journey made possible by train. Unfortunately, due to the infrequent service, Zeinab will either be far too early or just a few minutes late by taking the train. So she takes the bus that assures her arrival on time (even if she misses a bus she has other options/more regular bus lines). Both Olivia and Gloria attest to the inconvenience of the train timetable: Olivia will always take the bus because there are more frequent buses closer to her home, and Gloria does admit to checking her phone for appropriate train departures, but so far there has never been one that corresponds conveniently with her schedule. Ultimately, they decry the 30-minute interval of departures, preferring to take the bus and to cycle, respectively. It is impossible to spontaneously take the train when it best suits so she never even checks for train times, Olivia explains.

112 Scholten et al. Re-reading time-geography. P.585
113 Hägerstrand 1970, pp. 11–17
It is not just the train service timetable that poses restrictions, but also the bus service timetable: Gloria and Olivia also suggest that the buses could be more frequent, and as so, less crowded – a problem that they both face on a regular basis. Generally, the participants greatly benefit from the bus service in Malmö however, they do notice on the few lines that service Rosengård that there could be more timetable options. Olivia explains how she missed a job interview once because her bus was late, and also how she has to spend extra time waiting for the next bus at Södervärn as many are over-crowded and she has large shopping bags after grocery shopping. Gloria relies on the bus when she is working as a child minder, having to travel to and around Limhamn, and claims to spend lots of time waiting for busses to arrive. Although she mainly cycles, Juliet explains that she would be unable to keep working at her job in central Malmö if she were unable to cycle home after her late-night shifts as there is no buses to Rosengård available at this time. Clearly, there are temporal constraints to daily mobility produced by infrequent and unavailable public transport services, specifically with regard to the Rosengård train station. Due to the evident dependence on the public transport system illustrated by the participants, it is thus crucial to highlight the potential restrictions they face.

5.2.1.2. ‘Fixed Activities’ of daily mobility

There were also restrictions associated with the ‘fixed activities’ of daily life of the female participants, to borrow a term from time-geography. The consideration of fixed activities within the context of a daily time-budget allocation is intrinsically linked to gendered traditions of household and family (domestic-related) responsibilities and the activities necessitated by this multiple and simultaneous role as housekeeper, childminder, working mother, student, teacher, and so on. Of course, all genders encounter fixed activities such as employment or university studies, yet this argument posits that women tend to experience more complicated, diverse and dynamic daily schedule requirements than an average cis-able-bodied man, as illustrated by women’s more complex travel behaviour as shown by numerous travel survey statistics. Analysis of these gendered fixed activities that consume a day can be thus interpreted as an authority constraint insofar as their activities are under control of, or obligated by, an outside individual or authority: for example, having to take children to school as it is obligatory in Sweden for children to attend school; or perhaps being in a familial household in which socio-cultural norms consider the female-mother figure to take the domestic-household responsibility; even simply having children who depend upon you implies a certain parental limitation of individual, self-centred action.\(^\text{114}\) With regard to the five participants, naturally all of the women encountered fixed activities and obligations in their daily life. All have ‘projects’ to achieve in their day that require the resources of time and movement, thus either placing pressure on other activity requirements in the day, or necessitating efficiency of the means of transportation that they rely upon: time is precious. Fatima presented substantial fixed activities in her travel diary that limited her spatial-temporal mobility to some extent: as the sole mother in the sample group, Fatima displays differing, less-expansive mobilities to the other participants (as we can see in the visualisation of her travel itinerary). The possibility for her to travel long distances for long periods of time is heavily reduced by her responsibilities as a mother of her two young children: she must

\(^{114}\) Hägerstrand 1970, pp. 11–17
take her son to school every weekday morning and pick him in the afternoon, whilst returning home during this time to let her baby daughter nap. She must also buy groceries and prepare for the family, which requires specific activities and time resources. With regard to modal choice and considerations of time, Fatima relies on walking around Rosengård as she is not only unable to cycle – a capability constraint as she does not have this ability - but also the constant care and presence of her children throughout the day require her to walk oftentimes accompanied by a pram: travelling by car would be convenient yet neither can Fatima drive, although the family own a car. Walking then takes Fatima a longer time - consuming more of her daily time-budget - than cycling or driving would, yet because of these capability constraints these transport modes are inaccessible.

Zeinab also expressed limitations from fixed activities in her daily life: she works 08:30 – 16:30 during the day in Rosengård and then attends a Swedish language class most weekday evenings. Though not technically compulsory, Zeinab claims she must think of her future in Sweden, in which a fluency in Swedish is key, as someone with a foreign background. Thus, her needed labour to earn a living during the day added to the extra work towards ‘her future’ in the evening results in a seemingly very tight time-budget – one not experienced by a Swedish national ‘non-immigrant’ for example. Once again, having access to a car would allow Zeinab a more convenient, less-time consuming daily schedule however, this modal choice is unavailable as she in unable to drive. This loaded fixed activity schedule thus makes the efficiency and availability of the public transport that Zeinab depends upon critical.

5.2.1.3. Off-peak hours of activities and employment

The final temporal observation found in the travel diaries was the off-peak nature of some of the activities of the women and especially when it came to their employment. Seeing as the public transport system tends to prioritise peak-time commuting journeys (with the commuter train line servicing Rosengård within a limited timeframe of 06:00-22:00), it is to no surprise that individuals working and travelling outside of this conventional timeframe encounter restrictions with their mobility. Building on the constraints framed by the gendered fixed activities discussed above, the off-peak timeframe of employment represents another authority constraint to daily mobility. Juliet works part-time several weekday night shifts at a bar in central Malmö, finishing at 02:00 in the morning means she must rely on cycling home as there is no bus or train to Rosengård at this time. Gloria also works part-time as a childminder in Limhamn during weekday evenings and so depends on the bus service at off-peak, less-prioritised and infrequent time schedules. It is here that a modal restriction arises: whilst Juliet has no other option but to cycle, Gloria must switch between transport modes as the distance to her employment is too far to cycle, and the later accompaniment of a child on her travels means that she must take the bus. The family that employs Gloria provide access to a car and would prefer her to use it when travelling with their child however, Gloria’s foreign driving licence is not valid in Sweden and thus is unable to access this transport resource: one that would make her job more time-efficient and comfortable. This invalidity of driving license also represents both an authority and coupling constraint to daily mobility. Neither women are in full-time employment, and as an international student Juliet does not receive financial aid from the government during her studies so is required to find employment on top of her studies. Gloria expresses a struggle to find full-time employment
as she believes her insufficient level of Swedish holds her back. Thus, one could argue that both women are necessitated by financial factors to seek employment in part-time and off-peak employment, factors that tend to not affect privileged Swedish salaried workers with financial comfort and an efficiently-coordinating public transport service. This is an example of transport disadvantage as discussed by Mimi Sheller and Karen Lucas, as when poor access to public transport disproportionately affects less-privileged communities in society, contributing to a state of transport-related social exclusion.115 Seeing as those individuals in society most likely to pursue informal, part-time employment taking place at off-peak hours tends to be those experiencing precarity through various racial, ethnic, gender, age, ability and class barriers, the intersectional nature of this restriction to mobility is thus highlighted.

Temporal considerations of daily gendered mobilities thus shed a critical light on the central importance of time-budgets in the diverse activities in women’s lives and the various constraints that serve to restrict these everyday mobilities. Influencing modal choice behaviour, these restrictions ultimately highlight key dependences on public transportation, particularly at off-peak hours, and point out a fundamental inaccessibility of the new train service in Rosengård as being too infrequent, inconvenient and unsynchronised to the complex time schedules of our female participants.

5.2.2. Spatial Considerations of Mobility

Having looked at the temporal considerations of gendered mobilities, it is now time to look at the spatial considerations of the mobility experiences illustrated in the travel itineraries. Although difficult to separate such spatial dimensions from the temporal whilst employing a space-time geography approach, the intention here is to focus on the specifically spatial and distance-based measurement of space and accessibility, and the ensuing coupling constraints to daily mobility. A predominant theme emerging from the travel itinerary material is the perception of distance of Rosengård in relation to central Malmö: it seems to be imagined and conceptualised by the participants as a fundamentally separate and distance area and space in comparison with proximate districts in Malmö (i.e. Rosengård lies just over 2 kilometres from neighbouring Möllevången district yet feels further). This sense of distance is of course determined by the level of accessibility (spatial and temporal) endowed by the public transport system and in turn influences the modal behaviour of local residents in their daily mobilities (coupling constraints). Later in the final theme of the analysis, we will see how this perception of separation contributes to and exacerbates conditions of social segregation within wider Malmö. Another spatial restriction to mobility, the participants expressed a limitation of possible or potential new destinations that were available to them via their current modal transport choices: the introduction of railway into Rosengård has not yet seemingly broadened these women’s accessibility to new destinations. With an analytical look at one final GIS visualisation it is possible to observe the spatial reach – or ‘radius of action’ – of the five participants. Finally, there will be consideration of personal safety within public space, as a critical feature of gendered mobility and accessibility to/by public transportation.

5.2.2.1. The perception of distance towards Rosengård

A predominant theme emerging from the travel itinerary material is the perception of distance of Rosengård in relation to central Malmö, as well as the imagination of Rosengård as a fundamentally different place - or space - to central Malmö. It seems to be imagined and conceptualised by the participants as a fundamentally separate and distance area and space in comparison with proximate districts in Malmö (i.e. Rosengård lies just over 2 kilometres from neighbouring Möllevången district yet feels further). Although inseparable from the temporal resources required to travel such distances, an understanding of distance as a means to produce concepts of space and to determine feelings of peripherality is of particular interest in this study of Rosengård. Three of the participants – Olivia, Juliet and Gloria – expressed similar thoughts on the limitations of distance that they faced when travelling in and out of Rosengård. Olivia explained that she would never just ‘pop’ in to areas of central Malmö such as Möllevången or Triangeln during the weekday or weekend without planning this ‘project’ first: admitting that the time taken to get to these places is not even so long, she identified a feeling of distance or ‘hassle’ associated with the journey, so much so that it required prior planning. The same can be said for Olivia’s weekday evenings: she finds that once she has returned home from university in the afternoon she will not go back into ‘central’ Malmö again, positing an abstract perception of distance and separation between ‘central Malmö’ and Rosengård.

Juliet also expressed how she does not travel home in between her university studies and part-time evening work (despite a several-hour interval) as she deems the perceived journey too long and bothersome, only if it is a 20-minute bike ride. Juliet admits that cycling 20 minutes to other places in Malmö such as Värnhem, Möllevången or Ribersborg does not inspire the same feeling of distance or ‘effort’ as cycling to Rosengård. More than the others, it is Juliet who describes Rosengård as a mere ‘place to sleep’ and does not seem to conceptualise Rosengård in her fulfilment of everyday activities. This could be due to her life as an international student with university, job and friends mostly located in more central Malmö and thus naturally separates the two spaces conceptually: ‘sleep in Rosengård and live in Malmö’. For Olivia, this perception of distance could be attributed to her reliance on the public transport bus lines as the sole means of accessing downtown locations, amplified by the restrictions produced by infrequent timetabling of services (as explored earlier in this chapter). Gloria corroborates this feeling of marginality living in Rosengård due to what she describes as the insufficient public transport in the area and the poor quality of her own bicycle that not only makes journeys longer in time duration, but (perhaps just as importantly) also longer effort-wise and emotional-wise. Overall, one could understand this perception of distance and separation of Rosengård to central Malmö as a coupling constraint insofar as an efficient, frequent and comfortable transit service is required to overcome such feelings of peripherality. Ultimately this perception of distance can be understood as a restriction to daily mobility. Though much of this restriction is tied up with concepts of time and the temporal pressure in fulfilling activities, the conceptualisation of Rosengård as a fundamentally different and separate space ‘far away’ from downtown Malmö is of key importance to this study.
5.2.2.2. **Spatial access to new destinations**

Extending the distribution of accessibility to peripheral districts and socially-disadvantaged communities is central to the concept of mobility justice. Access to diverse activities across varied destinations throughout Malmö thus represents a critical priority of transport planning and wider urban development agendas, including of course that of the new railway service introduced in Rosengården. However, from the travel itinerary material collected, the participants expressed a limitation of possible or potential new destinations that were available to them via their current modal transport choices: the introduction of railway into Rosengården has not yet seemingly broadened these women’s accessibility to new destinations.

Whilst it is here important to remind the reader that the train station in Rosengården only officially opened its doors 6 months prior to the data collection, and thus understandable that mobility behaviours perhaps do not drastically evolve in such a short time span, it is still interesting to observe that none of the women seriously consider the train as a convenient modal choice. As such, they are not using the service to explore new destinations and opportunities across Malmö: **Olivia** expressed a genuine restriction by the bus lines available to her in Rosengården, explaining that since she moved to Malmö 8 months prior, she had not visited or explored areas in the city accessible outside of the two bus lines (no. 5 and no. 35). She has never travelled to places such as Värnhem, Sorgenfri or Ribersborg for example and thus expresses herself a missed chance on potential opportunities or activities in these areas.

With regard to a basic spatial barrier of the train station to convenient mobility, one must note its geographic positioning of the Rosengården train station. Due to the station being built along the pre-existing railway line (formerly reserved for trade freight), it could be argued that the station is not situated in an optimal location designed for convenient access for all of Rosengården’s residents. Located along Malmö’s artery road Amiralsgatan closer to Annelund district, it is clear that even residents living in central Rosengården are not considered prime beneficiaries of this transport resource. All of the participants expressed this concern with the train station. Most were unable to conveniently (time and effort-wise) walk to the train station to begin a public transport journey: for **Olivia** and **Julia** in the Student Housing the distance is 2 kilometres and 20-minute walk, as is the case for **Fatima**. This can be seen as a **coupling constraint** to daily mobility insofar as the physical attributes of the train station are insufficiently accessible for both our female participants and presumably the remaining residents in central Malmö.

Beyond this basic spatial consideration, it is particularly interesting to analyse the spatial reach afforded to the women by the public transportation available to them. To do so, I have produced one final GIS visualisation in which it is possible to observe the spatial reach – or ‘radius of action’ – of the five participants.
The above map (Figure 10) visualises the daily mobility paths of the five participants in Malmö overlapping in order to represent their differing and intersecting mobilities across time and space. This map represents a critical, feminist application of GIS corresponding with the visual tradition of space-time geographical theory that has been the central tool for analysis throughout this chapter. First of all, it is notable the contrast between the spatial reach of Fatima with that of Zeinab and Gloria. When thinking about daily constraints to mobility and the intersectional social positioning of individuals, it could be surmised from this map that Fatima’s role as a mother and primary carer for the household has resulted in a reduced radius of action as compared to the other participants. Though by no means a necessarily negative trend - Fatima’s life and its daily projects and mobilities are certainly of equal value to those of the other participants – it is interesting to examine this smaller spatial reach in terms of transportation accessibility. One could argue that Fatima encounters multiple, simultaneous constraints to her daily mobility: capability constraints to her modal behaviour as she is not able to ride a bicycle or drive the family car, and coupling constraints as she has responsibilities caring for her family and accompanying her children throughout their daily projects and mobilities. Due to such restrictions, Fatima’s movements across time and space are visibly limited as compared to the other participants.
Secondly, it is observable in the visualisation that Gloria and Zeinab exert the broadest radiuses of spatial action in their daily mobility, as we have previously seen with their heavily-loaded time schedules and off-peak employment/activities. What is highlighted here is the critical importance of the public transportation system in the elaborate daily mobilities of these women. They both rely on either bus or train to achieve their projects and responsibilities through longer-distance journeys than the other participants - even if Zeinab should benefit even more from the railway in her daily commute to Rosengård than she currently is. Seeing as neither Gloria or Zeinab drive, their only option is to use public transport to access these further locations in Hyllie, Värnhem and Limhamn. Convenient, frequent and comfortable access to public transport thus emerges as a critical requirement/factor in the daily mobility of those living in outlying, more peripheral districts like Rosengård. As for Olivia and Juliet, their spatial agglomerations are considerably similar due to their shared residence in Rosengård and studies at Malmö University, yet it must be noted that Juliet feels more flexibility in the modal options available to her as she suitable capable enough to cycle around Malmö.

### 5.2.2.3. Feelings of safety and security

One final spatial observation to draw from the travel itinerary data is the perception of safety and security during the daily mobilities of our female participants. When looking at prior research into gendered experiences of public transport systems, there clearly exists a fundamental inequality in modern cities insofar as women are experiencing substantially more discrimination in the form of verbal, physical and sexual harassment in the public space constituting transport service networks. Perceptions of personal safety feature heavily in research on mobility, accessibility and transport-related social exclusion, and has been proven to significantly affect mobility patterns, even if the threat is merely perceived and not realised. Central to discussions of gendered space and expanding on binary gendered differences, it remains true that some bodies encounter multiple and simultaneous precarities within public space according to their own intersectional social identities, for example queer, racialised and immigrant communities. Looking at Rosengård then, it is difficult to ignore the resounding associations with violence, crime and anti-social behaviour that dominate both media reports and general public opinion in Malmö and greater Sweden. To take a gendered perspective on such a pejorative spatial conceptualisation with regard to transport is critical: the enquiry into perceptions of safety whilst travelling in Rosengård and Malmö was therefore a key topic of discussion in the participant interviews and travel diaries.

Interestingly, such perceptions did not feature as heavily as one might expect. Every single one of the women claimed to feel generally very safe whilst travelling around Rosengård and Malmö, across all of their modal choices. From Fatima who always walks with her young children throughout Rosengård, to Olivia and Zeinab relying on the bus in their everyday commute, none of the women claimed to feel unsafe at any point of their journey. Not even Gloria or Juliet who conduct journeys at off-peak, night-time hours (i.e. Juliet cycling home after work at 02:00 in the morning) express any restriction regarding their personal welfare.

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With regard to night-time activities, Fatima does cite a reticence to leave the house unaccompanied by her husband during the evening hours, yet recognises that is founded upon *perceived* and not *realised* threats of insecurity as she has never experienced any negative experiences. Gloria also explains that at night-time she does feel safer whilst cycling as she says she is ‘mobile’ and can simply cycle away if trouble arises: she explains that waiting for long durations at bus stops makes her feel more vulnerable to threatening behaviour, thus the state of being ‘stationary’ feels more restrictive to her.

Critically, what did emerge from the travel diary material was a common defence of the safety and freedom they felt whilst travelling in the public space of Rosengård. Though perceptions of danger did not serve to constrain their daily mobilities, the participants did express a resounding critique of the pejorative, stigmatising discourse that afflicts their district. They emphasised their personal safety (and that of their families) in public space in spite of the pervasive negative reputation of crime and violence, rejecting the social stigma and segregation of the area. A discussion of social segregation as an analytical theme will come later in this chapter. Overall, whilst personal safety represents a critical restriction to the daily mobilities of gendered, racialised and other intersecting social identities across urban/rural contexts globally, it must be noted that safety did not emerge as key consideration regarding the women’s daily mobilities in this study. This fact in no way undermines the experiences of other women and communities that experience precarity in other urban areas, and the wealth of research afforded to this subject. Similar to the lack of financial resources that serves as a key restriction to mobility within the accessibility literature, the restriction of insecurity and the spatial conceptualisation of precarity did not emerge in this study.

To conclude this sub-section, it has been made clear that spatial considerations of gendered mobilities exert a significant impact on the daily lives and activities of the women participating in this study. Incorporating thematic constraints of spatial awareness of distance and conceptualisation of personal safety in public space, what is perhaps most emphasised here is the degree of spatial reach afforded by the public transport systems available to each participant. With the aid of the ‘radius of action’ visualisation that illustrates the daily mobilities across time and space, the importance of the intricate social identity positioning and varied responsibilities of each woman that determine their spatial reach has been emphasised, as has the dependencies on public transport to fulfil daily projects have been highlighted, hereby questioning the efficiency, convenience and overall accessibility offered by the new railway service in Rosengård.

### 5.2.3. Considerations of Social Exclusion and Accessibility

By way of synthesising the above thematic analysis of spatial and temporal considerations of daily gendered mobilities and the available public transportation system, it is of significant value to observe how the variety of discussed constraints contribute to a sense of wider social segregation of Rosengård from central districts in Malmö. First of all, it is critical to explore the social identities of the participants and how this background contributes to a certain precarity concerning their daily mobilities and access to opportunities. The consideration of the intersectional barriers to attaining accessibility correspond with the feminist stance of this research, and can be hereby interpreted/be represented as *authority constraints* insofar
as the limitations originate from a higher authority or normative hegemonic standards that exerts control over individuals in society. Secondly, I will return to the initial incentive for this study and make some final comments on the intended role of the Rosengård train station as a bastion of social integration and sustainability in Malmö. Throughout the study, what has emerged from the travel diary material is the strong correlation between an accessible public transport system and the fulfilment of diverse activities across Malmö. This broad and diverse spatial reach within Malmö can be hereby interpreted as a measurement of regional social inclusion and cohesion between stigmatised districts such as Rosengård. To what extent is the Rosengård train station and railway service facilitating social inclusivity to the benefit of its residents, and specifically its female-identifying residents. The results from the research material posit that this extent is limited.

5.2.3.1. Consideration of intersectional social identities

It is critical to incorporate a sensitive yet nuanced understanding of diverse gendered identities and social positions when exploring issues of mobilities and social integration. This infers that one must recognise the participants’ simultaneous and intersecting identities that reach beyond gender: for example, not only do the participants identify as women, but they are simultaneously identifying as Muslim, queer, unemployed, financially-unstable, with foreign backgrounds, ‘others’, and so on. This intersectional consideration highlights the varying degrees of power and inclusivity accorded to social positions within society and ultimately expresses how some women experience greater injustices or barriers to equality than others, serving to accentuate the underlying factors that lead to social exclusion.

This study has contributed in accentuating these intersectional differences as they manifest themselves through issues of daily mobilities and accessibility via public transport. I posit that the simplified, binary categorisation of gendered social identities prevalent in traditional travel survey data fails to capture such multiplicities and intricacies of mobility: with a general focus on peak-hour commuting journeys, it is not difficult to see the prioritisation of a certain type of individual’s travel behaviour (white, cis-hetero, able-bodied) that permeates both academic research and transport planning and policy-making, whilst erasing the elaborate experiences of those living in more marginal communities. These diverse, often-marginalised experiences of mobility and transportation play a critical role in navigating social sustainability and overcoming the challenges of social exclusion.

Within this study, the diversity of social identities beyond gender amongst the participants has introduced barriers to accessibility and thus potentially compounds wider developments of social exclusion. First of all, it must be noted that none of the participating women are Swedish nationals and have been raised outside of Sweden: they are already arguable perceived as ‘outsiders’ in society, especially as residents of Rosengård which is highly connotated with recent immigration into Sweden. Apart from Zeinab and Gloria, the women do not feel comfortable speaking Swedish. All of the women bar Juliet consider themselves women of colour; Olivia, Fatima and Zeinab identify as Muslim, with Fatima and Zeinab choosing to wear hijab; and Gloria identifies as a queer woman of colour. As students or having recently graduated, Olivia, Juliet and Gloria are not benefitting from comfortable financial situations. Such social positions do not seemingly conform to hegemonic social
normative standards that prevail in western, middle-class society and there are already considerable grounds for sentiments of social exclusion before even approaching issues of mobility and transport. Decisions made on modal choice and behaviour is an area that most highlights the varying social identities of the women: Olivia explains that cycling in Saudi Arabia is in no way prioritised as a daily transport option, with women forbidden to cycle unaccompanied by a male relative and without wearing full-length Abaya robes up until 2018: it has thus been illegal for Olivia to independently ride a bicycle throughout her formative years. The option of driving has also only recently been opened up to women in Saudi Arabia. Not to generalise the transportation cultures of Middle Eastern societies, there does exist a certain socio-cultural limitation to women driving cars, which can be seen with three of our participants: Olivia, Fatima nor Zeinab have not felt inclined to learn to drive. This authority constraint translates into a key capability constraint as Olivia lacks the basic skill and knowledge to ride a bicycle, let alone to feel safe and confident enough to navigate the complex cycling-path network in Malmö (a particularly bicycle-friendly city): cycling alongside cars, lorries and pedestrians can be a daunting prospect for an unexperienced rider. Fatima expresses a similar restriction with cycling as it was not socio-cultural practice for women to ride bicycles in Syria. Though Olivia no longer wears hijab here in Sweden, Fatima and Zeinab continue to do so and thus have expressed challenges that commuting by bicycle would pose in terms of maintaining their headscarves, especially in combination with cycling safety headwear and the oft-challenging weather in Malmö which could deter the most-ablest of cyclists.

With regard to the most accessible modal choice available to residents across Malmö, the travel diary material has suggested that cycling offers the most flexibility and diversity of access to destinations, overcoming many of the spatial-temporal restrictions that arise with the bus and train services in Malmö. It is Juliet who expresses the most freedom and access to opportunity, being able to essentially carry out most of her daily activities in central Malmö and only returning to Rosengård ‘to sleep’. It is hereby important to note that Juliet is young, able-bodied, and the only participating women who has grown up in western European society (Italy). Having grown up cycling, Juliet not only possesses the basic skill and knowledge needed to cycle, but also the confidence and experience of using a bicycle as a main transport mode to fulfil daily activities within a busy urbanised area. Despite not owning a car and thus not driving in Malmö, Juliet also has had a valid driving licence for a number of years. Though she encounters gendered experiences of movement in her daily mobility, Juliet does not experience the additional and simultaneous set of barriers to mobility as experienced by the other participating women. It can therefore be suggested that the diverse and intricate social positioning of the participants, and women in general, pose varying degrees of constraints to daily transport mobility, and thus accentuate pre-existing feelings of both physical and social exclusion from central locations in Malmö and wider integration into Swedish society, respectively.
5.2.3.2. Comments on Rosengård train station

Approaching the concluding remarks of this analytical chapter, it is necessary to make some final comments on the specific role of the Rosengård train station and railway service in tackling the challenges of social exclusion within wider Malmö: the initial provocation of this thesis research. Looking back to the driving research questions of this study, the extent to which the Rosengård train station has positively impacted upon the mobility opportunities of women in the area, and the simultaneous reduction of regional social segregation, has been a driving interrogation of this research. We can here look back to the theoretical background of social exclusion, in which poverty assumes a more multidimensional concept of deprivation in the ‘lack or denial of resources, rights, goods and services and the inability to participate in the normal relationships and activities available in society’\(^{117}\). Critically, Karen Lucas applies such thinking to formulate the concept of transport-related social exclusion by highlighting the pivotal importance of immobilities and reduced access that contribute to not only a state of transport poverty, but also serve to exacerbate wider problems of social segregation of the more vulnerable, minority communities in society.\(^{118}\) Looking beyond at theory on mobility and transportation justice - defined as the socio-political movement to overcome the uneven distributions of transport access accorded to citizens in a community, with particular attention to racial, ethnic, age, ability and class barriers to mobility – the question arises as to how the new railway in Rosengård contributes to such social justice of mobility.\(^{119}\)

Clearly, the reach of this study is unable to provide a comprehensive, objectively-accurate answer to such a large enquiry however, the results from the and their travel itineraries do provide an insight that contributes to an evaluation of such an endeavour. In order for the train station to confront issues of social segregation (once again recognising the early stages of the service inauguration), the railway must first of all be chosen as a modal choice by local residents. Ultimately, the participating women of this study are not using the train station and are not seriously conceiving it as a credible addition to their transport modes in Malmö. We have seen throughout the travel itineraries and accompanying reflections that the train station is not currently offering a convenient alternative to their pre-existing modes of transport and mobility. Neither does it seem to be radically expanding the spatial reach and access to diverse opportunities within the city. To take Zeinab as an example of an ideal beneficiary of the new railway living in Hyllie, the service is ultimately too infrequent and inconvenient for her daily commute/activities and as such, she remains on the bus.

Regarding the particular attention to racial, ethnic, age, ability and class barriers to daily mobilities of citizens in a community – an attention that corresponds with the feminist nature of this research - the diverse social positions of the participating women have indicated towards an inadequacy of the railway service, insofar as it is not responding to the varied spatial-temporal requirements of the equally varied participant backgrounds. Despite the Amiralstaden development claiming to prioritise processes of community engagement and consultation, each of the women ultimately express a sentiment that the train station has not been designed for them. Overall, this study has suggested that the train station in Rosengård

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\(^{118}\) Lucas, Karen. 'Transport and Social Exclusion: Where are we now?'. 2012
does not go far in achieving substantial transportation or mobility justice in the daily lives of
the sample participants, and therefore cannot yet claim to be radically affecting levels of
social exclusion in Malmö.

5.3. Analytical Conclusions

To conclude this analytical chapter, it is apt to summarise the three central themes that
have emerged throughout this research. An analysis of the travel diary dataset and the
complimenting GIS visualisations - through an application of space-time geography theory
and interpretation of mobility constraints - led to the illustration of three critical
considerations of gendered daily mobilities: temporal, spatial, and those relating to wider
concerns of social exclusion. To quote Hägerstran, these considerations together formulate
an intricate “net of constraints” that capture the life paths of women in their daily
mobilities.¹²⁰

Temporal considerations highlighted the significance of public transport service
infrequency, temporal constraints of ‘fixed activities’, and the poor synchronisation
with off-peak time activity schedules. These issues contribute and exacerbate time the
pressurised ‘time budgets’ that women usually encounter in their daily lives.

Spatial considerations highlighted the spatial reach and access to opportunities through
the space-time map that visualises the women’s radiuses of action over the course of one
day, and the dependencies on the public transport system in Malmö (primarily the bus)
in the fulfilment of daily activities and responsibilities within these spatial reaches. The
conceptualisation of Rosengård as ‘far away’ permeated the discussion with the
participants’ common perception of distance from central Malmö.

Considerations of social exclusion highlighted the extent to which the intersectional social
identities of residents contribute to both sentiments of social exclusivity and intricate
barriers to mobility. Finally, the socially-cohesive objective of the Rosengård train station
was analysed in relation to its work towards mobility and transport justice, ultimately not
yet seeming to affect radical relief of transport-related social exclusion in Malmö.

6. Concluding Remarks

In this concluding chapter I will bring together the analytical findings of the research and respond to the overriding research questions that have motivated the investigation of this thesis. A reflection of the theoretical and methodological choices that have framed the study will also follow. Finally, there will be a discussion of potential further research areas that would serve to retain the local knowledge and relations of trust acquired in this study, and aid in further study of gendered transport phenomena in Malmö.

6.1. Reflections

Overall this has been an exploratory, qualitative research into the complexity and intricacy of daily gendered mobilities as experienced by women in Rosengård, inspired by the development of the new train station and railway service in the district. The purpose was to explore to what extent this new modal resource would benefit women specifically in the area (referencing the incontestable variations and inequalities of gendered travel behaviour) as framed by its wider goal of social inclusivity and sustainability. To challenge the prevalent and simplifying ‘journey-to-work’ focus that dominates research and practice of travel data analysis represented another key aim. What resulted was an examination and visualisation of the participants’ relationships with various mobilities via public transportation throughout Malmö, and ultimately the heavy dependencies these women have on the public transport system to pursue activities and opportunities as part of a happy, fulfilling life both in Rosengård and wider Malmö.

Considerations of social justice and feminist methodology permeate the theoretical framework of the research: a theoretical background of mobility justice and capability approaches has equipped this study with a firm understanding of the uneven distributions of transport access accorded to citizens in a community, with particular attention to racial, ethnic, age, ability and class barriers to mobility, that has overall helped me to conduct a suitably intersectional and socially-sensitive research. Such a background has emphasised how such factors of immobility and lack of access that contribute to a state of transport poverty also serve to exacerbate wider problems of social exclusion and segregation of the more vulnerable and minority communities in society, to what Karen Lucas describes as transport-related social exclusion. Such issues are of particular relevance to the socially-exclusive stigma attached to Rosengård and its residents.

As for the analysis, a scrutiny of the travel diary dataset and the complimenting GIS visualisations - through an application of space-time geography theory and interpretation of mobility constraints - led to the illustration of three critical considerations of gendered daily mobilities: temporal, spatial, and those relating to wider concerns of social exclusion. To quote Hägerstrand, these considerations together formulate an intricate “net of constraints” that capture the life paths of women in their daily mobilities. Engaging well with the visual

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121 Lucas, Karen. ‘Transport and Social Exclusion: Where are we now?’ 2012
tradition of time-geography praxis, the feminist application of qualitative GIS visualisation has had a critical role within the analytical process of this research. It has contributed to a holistic and dynamic illustration of daily mobilities and capabilities regarding spatial reach and accessibility.

We will now explore these critical conclusions in relation to the original research questions guiding the thesis. Before doing so, it is worth reiterating that to draw generalisable conclusions about the mobility patterns of women and their engagement with the new Rosengård train station has not been the aim or task of this study, as formulated by the feminist methodological approach incorporated throughout the thesis. Rather, there has been an exploratory and participative process of knowledge production that has paid attention to the diverse and oft-marginalised experiences of local women regarding issues of urban transportation.

6.2. Research Questions

The aforementioned considerations of gendered daily mobilities - temporal, spatial, and those relating to wider concerns of social exclusion – help to address the original research questions that inspired the exploration of this research. To conclude the study, there follows a brief response to each enquiry.

• How are women using public transport within their daily mobilities in Rosengård?

Overall, the results from the study indicate towards a diverse, intricate and heavily-dependent relationship with the urban transportation system in Malmö. Though the existence of one, universal travel behaviour was neither sought out nor discovered in this research, there has been an emergence of particular themes within the analytical findings. The results from the five participating women correspond with and substantiate the conclusions made by the wealth of research into gendered travel behaviours: women tend to have more complicated yet shorter travel patterns [than men] as they combine journeys to work with gendered-routine activities such as grocery shopping and childcare tasks, and tend to rely on public transport more so than men.123 As Tim Cresswell writes,

“the gender-differentiated roles related to familial maintenance activities place a greater burden on women relative to men in fulfilling these roles resulting in significant differences in trip purpose, trip distance, trip duration, transport mode and other aspects of travel behaviour”124

Such a statement can be supported by the findings of this research. Within the Rosengård case study, there has been a development on the simplifying, binary gendered-activity responsibilities with an intersectional consideration of multiple and simultaneous social positions: the participating women in this study experience marginalising identities additionally and simultaneously to their gender, such as statues of class, ethnicity and religion.

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that serve to shape and restrict their daily mobilities. As illustrated in the GIS visualisations, the participating women are pursuing a variety of modal choices of urban transportation in multiple ways throughout Malmö to access a range of activities: such modal choices reflect the diverse social positions and specific capabilities of the participating women. In terms of spatial reach, the women display a critical dependence on public transport to bridge the largely-perceived distance between Rosengård and central Malmö: it is important to note the reliance on the bus service in particular, and not yet the new railway service due to several restrictions. A key temporal finding was the prevalence of off-peak responsibilities amongst the participants, related to the informal and part-time nature of their employments (i.e. Juliet and her late-night bar shifts, and Gloria with her evening babysitting job) that resulted in a key break from the traditional peak-hour commuting patterns dominating official travel survey data.

• What restrictions are women facing in their daily mobilities in Rosengård?

The analytical conclusions of the research recognised a multiplicity of restrictions – or constraints – in daily mobility that women were encountering in Rosengård. Such constraints served to inform the fundamental capabilities of the residents insofar as limiting accessibility to potential opportunities throughout Malmö. Temporal themes of transit service infrequency, temporal constraints of ‘fixed activities’, and the poor synchronisation with off-peak time activity schedules emerged as significant restrictions to daily mobility, exacerbating pressurised ‘time budgets’ that women usually experience in their daily lives. These restrictions applied particularly concerning the new train station and railway service in Rosengård. Spatially and abstractly speaking, the perception of distance emerged as an additional limitation to convenient mobility. Interestingly, issues of personal safety and financial accessibility did not feature heavily in the research as restrictive elements.

The ‘fixed activities’ of the participants highlighted their complex, intersectional social positions and how this interacts with daily mobilities: from the familial household responsibilities experienced by Fatima needing to coordinate her own movements with those of her two children and their respective school/nap schedules; the capacity/authority constraints afflicting Olivia who has been forbidden to learn to cycle growing up in Saudi Arabia; to the congested daily schedule of Zeinab working full-time combined with additional evening Swedish language classes, there has been an emphasis on the intersecting social barriers to mobility and accessibility.

• How is the provision of the Rosengård train station pursuing transportation justice in its extension of opportunities to women and response to social exclusion in Malmö?

As highlighted in the aforementioned restrictions to daily gendered mobilities, this research suggests that the Rosengård train station has yet to make a radical impact in extending opportunities to women in the district. Ultimately, the participating women of this study are not using the train station and are not seriously conceiving it as a credible addition to their
modal choice in Malmö. We have seen throughout the travel itineraries and accompanying reflections that the train station is not currently offering a convenient alternative to their pre-existing modes of transport and mobility. To take Zeinab as an ideal beneficiary of the new railway living in Hyllie and working in Rosengård, the service is ultimately too infrequent and inconvenient for her daily commute and as such, she remains on the bus. The restrictions of service infrequency, temporal constraints of ‘fixed activities’, and the poor synchronisation with off-peak time activity schedules are predominant in the results.

From the analytical findings of this research, it could be argued that the aim of mobility and transport justice, defined as the socio-political movement to overcome the uneven distributions of transport access accorded to citizens in a community, is not currently being sufficiently met in Rosengård. The service does not seem to be encompassing the diverse travel requirements necessitated by the diverse responsibilities of the diverse social positions of local residents. Overall, one could argue that the service has been designed for the normative commuter-traveller in society: professional, able-bodied, middle-class, Swedish cis-male. As such, its objective of regional social cohesion – and a step towards reducing wider inequity in public health - in the form of heightened connectivity has been challenged and problematised. It is important to note that, writing in the Spring of 2019, the early stages of the station’s development have been consciously considered throughout the project, and thus the potential for greater results in time.

6.3. Suggestions for further research

This study – with only five in-depth contributions – does not claim to be representative of women’s experiences in Rosengård, opting to explore and illustrate some of the diverse mobilities encountered in their daily lives that was possible within the confines of the Master thesis. However, the extension of the participant sample size to incorporate even more resident voices and experiences would be of benefit to any future research.

Additionally, though not an explicit intention of the research, the findings do indicate towards the importance of the prior planning process of the development. Further research into the official Swedish policy of gender recognition – or ‘gender mainstreaming’ – within transport planning would provide a useful perspective in examining gendered mobilities, complemented by an inclusion of multiple social identities in transport design. This study has focused on the gendered user-experience of the current operation of the Rosengård train station, and so a consideration of the preliminary stages of planning and decision-making could be of interest and advancement to the subject field. As Christina Scholten et al posit, a feminist application of time-geography through qualitative GIS visualisation can serve to highlight the differences and inequalities of transport resource distribution to official policy-makers and transport planners and thus make a step towards affecting real change to local residents in communities like Rosengård.

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