New Paradigm of Mobility, Public Transport, and Sharing Economy

Exploring the strategic mobility of women in Lindängen – social dimensions of women’s mobility patterns

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Abstract

This study aims to contribute to getting more knowledge about how promoting and strengthening the new paradigm of mobility in a deprived area led to social inclusion. The advent of women's transport on a global scale is only a sign of greater gender inequality in cities being manifested by their limited access to urban resources. Integrating a theoretical framework of mobility justice and social justice with the methodological praxis of focus group, semi-structured interview, and statistics that the research has been conducted an in-depth interview with 9 participating women which are subsequently implemented through feminist research. The analytical part of the study is illustrated within three critical considerations of gendered daily mobilities: temporal, spatial, and those relating to wider concerns of policy and transport planning. Ultimately, the research suggests that the new paradigm of mobility expand the sharing mobility opportunities of women in the district, and a step towards reducing wider inequity in public health in form of increasing knowledge alliance and culture of learning.

Keywords
Sustainable mobility, New Paradigm of Mobility, Sharing Economy, Sharing mobility, Social justice, Mobility Justice, Gender Mobility
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LIST OF ABBREVIATIONS

SUMP - Sustainable Urban Mobility Planning
SNMP - Sustainable Neighbourhood Mobility Planning
POTM - People-Oriented Transport and Mobility
MUV - Mobility Urban Values
NMAP - Neighbourhood Mobility Action Plan
1. Introduction, Problem, Purpose and Research Questions

1.1. Introduction, Problem

Lindängen is one of the five areas that was part of an urban plan to improve the social conditions in Malmö between 2010 and 2015 (“Lindängen”, 2018). Investing in this area has begun to change the environment through a cross-cultural collaboration involving many Lindängen citizens and a large number of different partners. The investment plan is characterized by the involvement of citizens, the development of places to visit, efforts to create regional security, regulating public spaces and shortening the transportation routes to increase efficiency. In order to achieve these goals, it is needed to develop resilient transport infrastructure, foster innovations, promote inclusive and sharing mobility.

People of Lindängen as a multi-ethnic, international and very young population suffers from poor transportation (”Malmö (Lindängen)”, n.d.). Other characteristics describing Lindängen as a poor urban zone region are low employment rate per capita income and underwhelming education below the standards of Malmö. Also, 61% of locals said they did not feel safe in their neighbourhood in 2011 compared to 34% of the rest of Malmö. The high crime rate and open drug dealing have intensified this unsecured perception toward this region. Fragmented ownership of real estate in the past has created a complicated situation for municipal initiatives. Without the consent of private real estate managers, public management has not too much power to promote the local environment. Thus, this has made local people disillusioned with municipal policies.

Furthermore, many projects that involve women fail to foster social innovation. According to Sveriges Radio (2013), Sandra al Batal decided to establish a women's association in Lindängen in Malmö. She saw how many people sat in isolation and rarely participated in social activities, and after knocking over 1,000 doors and persuading both the women and their men, an association of women was formed at Lindängen. The project was initiated by the Tenants Association and was funded by Stena, Willhem and Malmö City property owners. The idea of the project was that the women would form an association to be able to apply for association grants. Nevertheless, the project became unsuccessful, and Gaby Wallström from the Söder metropolitan area pointed out that the women in the group participated in other activities that already existed on Lindängen, for example, Future House and the Allaktivitetshuset.

According to Sandra al Batal, the project schedule suited women well because it was open during the day, while the women's children are in school. On the ground of the above researches and owing to lack of accessibility to safe public transportation, Lindängen has become an isolated area. So, women avoid participating in social activities during evenings and nights.
The thesis investigates mobility patterns among women, in particular between the age of 26 and 40 who are responsible for childcare in their families while having a part or full-time job. Women have the same rights as men to have a safe and secure commuting experience. Furthermore, they have a large economic contribution and often shape the behavioural patterns of their children. According to the latest United Nations report, there is an urgent need for sustainable transport development, especially for specific groups including the elderly people, disabled and women (United Nations, 2015).

The objective of the study is to describe transport restrictions which can be significant barriers to social inclusion. Planning and decision making are essential for sustainable public transport concept. The feeling of insecurity, vulnerability to crime, and lack of knowledge on certain means of transport limit women’s mobility. These limitations can be viewed as barriers to their effective participation in public in terms of social and economic aspects. Chakwizira (2009) argues that transport planning decisions for the studied group (women aged between 26 and 40) do not reflect the difference in the balance between work and life for many women. For example, childcare follow-up who struggle to keep a full-time job while taking care of their parents. Most urban transportation systems are not designed to meet the needs of women to associate multiple trips, many during non-peak hours and off the main transport routes. Women use public transport more often than men, but this relationship is never explored beyond the scope of transportation planning (McLaren & Agimen, 2015). In this regard, Levy (2019) uses the intersectional feminist approach by examining how intersectional social identities of individuals go beyond a simple and binary understanding of gender, as well as how race and power relations affect their access to mobilities and modal choices.

1.2. Purpose and Research Questions

The purpose of this study examines the uneven distributions of transport access according to women in Lindängen by visualizing and documenting the social dimensions of women's mobility patterns. The development of transportation as an innovative enterprise tries to reduce the regional socio-economic segregation. This research invites a group of women to discuss their daily travel concerns and thus its applications for a wide variety of potential commuters. Increasing social sustainability turns out to be a critical study of social inclusion and mobilities of peripheral communities. The critical objective of this transformation is social justice related to public transportation. So, the thesis employs qualitative approaches that will be used to go deep into gendered mobility in Lindängen and also analyses the effects of a new paradigm of mobility on women aged between 26 and 40. New Mobilities Paradigm - as interpreted by Mimi Sheller and David Urry is a renewed emphasis on the pluralized concept of ‘mobilities’ (Sheller & Urry, 2006). Sheller (2018) argues that ‘mobilities have always been the precondition for the emergence of different kinds of subjects, spaces, and scales’.
Before doing so, it is worth reiterating that to draw generalizable conclusions about the mobility patterns of women, their engagement with an only specific mode of transportation has not been the aim or task of this study.

### 1.2.1. Research Questions

- What type of barriers and restrictions can be related to women's mobility patterns?
- How is the provision of the new paradigm of mobility in Lindängen pursuing transportation justice provides an extension of opportunities to women and promote social inclusion in Lindängen?

### 1.3. Previous Research

This thesis investigates different aspects of mobility such as gender, justice, and accessibility to public transportation among a special group of people. This section includes an interdisciplinary approach integrating urban theory studies, gender studies, and urban transport planning. Also, a literature review about the impact of public transportation on social sustainability is conducted. Most of the theoretical background is based on the concept of the individual right to space and transport by promoting the concept of “mobility and social justice”. This concept is a combination of theoretical experiences of new mobility models and the political philosophies of justice. In this regard, "mobility justice" uses a mobility analogy to examine the constitutive process of mobilities, along with sensitivity to the fairness of movements in terms of rights, freedom, ability, distribution, and domination. Furthermore, some of these theoretical fields will be examined in greater detail in the thesis, particularly in the new conception of mobility such as smart mobility. Sheller (2006) notes that there is a wider range of social mobility and accessibility studies in the social sciences that emerged with the new models. Sheller argues that the meaning of mobility justice is in harmony between the theoretical results of new mobility models and the political philosophies of justice. This theory will be discussed in more detail in chapter 6. Given the theory of justice, the new model moves in a very important direction that focuses on the flexibility of mobility relationships. Mobility justice explores to what extent an individual’s transportation is affected by class, gender, race, and other social constitutions. According to Wellman’s analysis of mobility and planning, mobility is distributed as an unequal source of urban environments (Cresswell, & Uteng 2008).

Wellman (2019) believes that the principle of mobility justice is to embrace a broader view of mobility based on the needs of a wide range of groups, especially those who are bounded by some sociological limitations. According to this statement, more emphasis is placed on public transportation and forms of mobility that are used by community members. Similarly, Cass and Manderscheid (2019, 104) refer to the concept of "mobility justice" which proposes a new concept of social sustainability and environmental transport that can help future lifestyles and mobility. Wellman’s analysis of mobility planning explores mobility as a source unequally distributed in
urban landscapes which will be discussed in chapter 6 (sharing economy) in more details. While Wellman examines the reasons for intersectional injustices, his analysis is limited to a specific urban area in the same way criticized by Sheller in regard to transportation justice.

1.4. Layout

This thesis builds on several studies with a qualitative approach which is made up of the following parts. First, strategic mobility is explored, particularly, among women aged between 26 and 40. This study considers those wider debates to increase social capital and achieve safer public transportation options. Given all aspects of a commuting experience such as the quality of facilities and indoor atmosphere, identifying the main concerns of women would have an appreciable impact on their effective presence in public spaces. This project examines the impact of new mobility paradigm such as smart mobility on habit change of people as a paradigm shift to a more flexible and multi-modal transport system. Furthermore, I explore how sharing economy as a powerful tool can contribute to the promotion of social sustainability by an increase in the activity of women. In order to establish our understanding of what the sharing mobility transition and its implications would be, I review how innovations in mobility can be contextualized within socio-technical transitions. Chapter 6 introduces some key elements of the smart mobility transition including new fast-growing transportation methods. Also, the need for transforming the current transportation systems and infrastructures will be discussed.

In the chapter of “Theoretical Framework”, some efforts were made to explore briefly the definition of social justice and mobility justice in relation to transportation. The new paradigm of mobility pursuing social justice and sharing economy related to transportation by expanding accessibilities and eroding social segregation in the district area and promoting new opportunities for women.

1.5. Delimitations

As far as the scope of this master thesis project is concerned, it is not intended to suggest a specific transportation mode in Lindängen. Initially, there were several limitations to this research project. For instance, it is understood that the design and development of sustainable mobility strategies are time-consuming processes. Any modification to the modal behavior of citizens will take a lot of time. The evaluation of transportation systems and future developments in Lindängen will not be the objectives of this study. This research aims to open doors wider about the current situations of Lindängen transportations and suggest a few solutions. Naturally, due to the limited time for a master thesis project, no effort has been made to examine the critical issues arising from the development of planned projects.
2. Lindängen and SUNRISE project

2.1. Lindängen

Lindängen as the case study was ultimately chosen due to its swift development, ethnic, and socio-economic characters (Lindängen, 2018). Also, in terms of public transportation, Lindängen is mainly covered by bus. It is worth noting that this study focuses on the neighborhoods that fall within proximity to the bus stops where the main community of Lindängen is located. Furthermore, the district of Lindängen was chosen as the study area due to its accessibility to public transportation and measurable accessibility based on its differences in demographics and socioeconomics aspects. Lindängen is located south of the inner ring road at Munkhättegatan and consists of many apartment blocks ("Ny gång- och cykelväg längs med Munkhättegatan", 2017). Most of these buildings were built in the 1970s. The bus number 2 and 33 end at Lindängen. The bus number 2 departs from the central station and after 29 minutes reaches Lindängen. They also could cross Möllevången and Södra Sofielund leading to Lindängen. Furthermore, there is one accessibility to Lindängen by train taking approximately twelve minutes to reach the Syd Svägertorp station by foot. These trains depart every 20 minutes. In the Syd Svägertorp station, a commuter should transfer to bus number 33 that departs every 30 minutes to reach Malmö Tenorgatan in Lindängen.

![Geographical map of Lindängen](image)

Figure 1: Geographical map of Lindängen- Source: Google map 2020
2.2. Projects in Lindängen

In order to understand the current and future necessity to develop the transportation infrastructure, some projects have been explored which are in-progress in Lindängen. One of the projects is “Case Lindängen” (Davidson, 2017). Urban area director Lena Wetterson Sjöstedt said that “Case Lindängen” is not a project, but a pilot program in which different type of stakeholders are involved. Not only that, citizens, municipality, the business, community, property owners, and non-profit organizations cooperate in the development of Lindängen. Lindängen project is a new plan for its central part where the square will be renovated to promote services and business. It is projected that between 200 and 300 new houses will be built and simultaneously, several projects and initiatives are running at Lindängen (Berglund, 2019). Trianon’s social housing project at Munkhättegatan is another example where the residents will receive job offers in various forms such as: Malmö university’s health initiative, night football and police work to prevent crime. The idea behind these developments are revolving around long term solutions based on the promotion of common goals and knowledge. These developments: however, will not be fulfilled without enough transportation which can provide equal access for all activities. Owing to the SUNRISE project analysis many developments will be happening in the center of Lindängen that is shown in figure 1.

The new express bus service which is estimated to start operating in 2021 is being developed by a collaboration between Skånetrafiken, Nobina and Malmö municipality (“Nya MalmöExpressen”, n.d.). The construction of the first station started in 2018 at the western harbor and it is forecasted that the end station which is at Lindängen C will be built in 2019. It has been predicted that travelers on this route will experience a smooth and comfortable experience offered by the latest and environmentally friendly technologies.

Four new CIVITAS projects (including SUNRISE) focus on urban districts. CIVITAS is a network of cities for cities committed to cleaner, better transport in Europe and beyond. Since it was launched by the European Commission in 2002 ("Living Labs", n.d.). The CIVITAS initiative helps cities to test and develop a set of integrated measures for sustainable urban mobility. CIVITAS cities' goal to demonstrate that it is possible to increase a high level of mobility for all citizens to offer a high-quality urban space and environmental protection through sustainable mobility. By assuming neighborhood-specific features such as proximity, trust, and identity, some strategies can be created leading to new types of mobility solutions. These solutions aim to strengthen transportation developed by people through social innovation and neighborhood governance.

SUNRISE “sister” projects included: Cities-4-People, METAMORPHOSIS, and MUV that are funded under the same call ("Sister projects", n.d.). Cities -4-People is a project involving sustainable and people orientated transport as a solution for mobility and peri-urban areas today.
Cities-4-People engage in participatory practices of social innovation and neighborhood governance and builds on three main keys: citizens’ participation, community empowerment, and sustainable urban planning. By developing and indicating a framework of support services and tools, Cities-4-People reinforces these communities to actively participate in shaping their local mobility innovation ecosystems in line with a People-Oriented Transport and Mobility (POTM) approach. POTM incorporates a combination of new digital and social technologies using an inclusive and multidisciplinary approach to deliver solutions that have a low ecological impact, a shared mentality and the potential to solve real urban problems.

MUV - Mobility Urban Values: Changing behavior in local communities, using an innovative approach to improving urban mobility, changing citizens' habits through a game that combines digital and physical experiences. Instead of focusing on cost-effective and fast-paced urban infrastructure, MUV encourages local businesses, policymakers, more sustainable and healthy mobility options by participating in positive community action. Mobility and environmental data collected through mobile apps and monitoring stations allow policymakers to promote planning processes which leads to producing new services.

Metamorphosis: The metamorphosis project aims to transform neighborhoods into more specific and shared spaces. The project starts from the assumption that when a neighborhood has many children in its public spaces, it is a key indicator that it was designed as a people-orientated and sustainable neighborhood. The project incorporates an innovative and participatory approach, which encompasses the direct involvement of children as important players at each phase of the project from planning through implementation, evaluation, and dissemination.

2.3. SUNNRISE Project

Around the swift development in the area, I conducted an interview with Joanna Christensson who is working at Malmö Stad and is fully engaged in an EU-project called SUNNRISE focusing on the sustainable mobility in Lindängen (Christensson, et al., 2019). SUNNRISE project investigates problems of mobility in the neighborhood of six cities including Malmö. These activities include the entire innovation chain including identification of mobility problems, development of innovative ideas, fundamental implementation, systematic evaluation and dissemination in the form of a precise plan known as “Neighborhood Mobility Pathfinder 1”. The focus of this project has been mainly put towards immigrants, women, the elderly people. The Lindängen program is a 5-year pilot program designed to provide a model for managing the geographic program. Investments and projects included in the program will total 23% of the budget. Target SEK 500 million (€ 50 million) and both social and physical changes in the neighborhood. SUNNRISE is the foundation of a sustainable mobility concept for completing the sustainable mobility projects (SUMP). Needless to say, the sustainable mobility will be at the heart of transport strategies in this plan by targeting the improvement of public transportation. However, it is also important to
understand how to design a criterion to measure the level of improvement ("Sustainable Urban Neighbourhoods - Research and Implementation Support in Europe - TRIMIS - European Commission", 2019).

Not only public transportation, but this project is aimed also to increase the safety of pedestrians and cyclists (Christensson & Geppert, 2017). Furthermore, the new traffic route is designed to create more safe environments for children to play. The lack of an appropriate and coherent traffic guiding system for public and private services such as delivery, maintenance, police, and heavy vehicles regularly occupy pedestrian and bicycle paths. Unfortunately, the illegal and fast driving on bicycle lanes on a regular basis has influenced the perception of insecurity for using green alternatives to public transportation. As a result, people avoid commuting in the vicinity of specific locations at a specific time. Thus, one of this project’s objectives will be encouraging residents to use public spaces.
3. Theory

The chapter presents the theoretical framework for research questions in this dissertation. “What type of barriers and restrictions can be related to women's mobility patterns?”

This chapter is divided into different sections in regard to mobility from different aspects. The first section introduces a theoretical background providing a wider conceptual understanding to this research while the subsections provide concrete details about the new paradigm of mobility theories and impact of social justice utilized throughout the methodological and analytical processes. The theoretical approach guides the study in different aspects. For instance, how the dependency on one mode of transportation and lack of enough mobility has led to a social deprivation and exclusion in some parts of the city. The opening overview will introduce some factors which impact on mobility habit of women aged between 26 and 40 on one hand and provide an integrated discussion of how these parameters can change the mobility strategies of women on another hand. So, the first discussion of the theoretical framework provides a wide spectrum of contextual backgrounds of this research, whilst the sections explore the perspectives of mobility justice and gender inequality integrated with qualitative research method. The second discussion employs approach will elucidate the theoretical background behind the new mobility paradigm, sustainable mobility as well as the theoretical framework of sharing economy.

3.1. Mobility and Accessibility

To realize the concept behind mobility justice, it is necessary first to define mobility. Kronlid (2008) has been defined mobility as the common distinction between potential and reveals the movement. So, one of the definitions could be ‘potential movement’. According to (Urry, 2000), it is argued that mobility is a multidimensional concept and phenomenon, that is, there are several aspects such as spatial mobility, temporal and contextual mobility (Kakihara & Sörensen, 2001), and the barriers between spatial and social mobility which these notions are still in progress to be realized. In chapter 6, an effort is conducted to realize the spatial, temporal, and contextual dimensions of mobility and interacting restrictions in Lindängen. As Sheller (2018) argues regarding the description of accessibility and mobility, the former refers to any movement in general while the latter is more about measuring the ease of reaching destinations. Hence, in sense accessibility includes mobility and connectivity. Mobility is an important part of any environment as vital as Urry (2004) believes that these are the lens through which societies should be analyzed. It directly shapes how our time-spatial relations are defined, and emotions are tied in various ways to class, ethnic, gender, and social ideals.
3.2. Mobility Justice

The concept of mobility justice is based on a combination of theoretical justifications derived from new mobility paradigms and the political philosophies of justice. To appreciate the "mobility justice" notion, a mobile ontology is necessary to examine procedural processes, along with sensitivity to the fairness of movements in terms of rights, ability, freedom, distribution, and domination. Sheller (2018, 29) argues mobility justice:

“concerns overturning marginalization and disadvantage through intentional inclusion of the excluded in decision making and elimination of unfair privilege. It puts “oppressed” and “disenfranchised” groups front and center.”

Furthermore, Wellman (2019) explores how this is possible in terms of transportation planning, which he believes should incorporate the principles of "mobility justice" to "broaden our understanding of the mobility needs of a large group, particularly the socially marginalized group. For Wellman, the result shows the importance of public transportation and various mobility that has been used by a less advantaged member of the community. Likewise, Cass and Manderscheid (2019, 104) explore the concept of mobility justice, to develop a new utopian imagination of sustainable social and environmental transport that can contribute to negotiating future lifestyles and mobility.

3.3. Theoretical background of Gender Mobility

This section also states that although space is not inherently gender-based, the unequal position of women in society structures women’s and men’s utilization of urban space over time often resulting in exclusion based on gender (Cresswell & Priya, 2008). Feminist criticism of blind gender transport research and planning has been recognized in mobility research since the 1970s; women tend to have more complex travels but are shorter because they often travel to work with their children, going to school and childcare, taking care of older relatives, as well as other daily activities such as shopping for food and medical visits. And they tend to use the cheaper mode of mobility. This phenomenon has been pursued by several multipurpose trips on a daily basis called "travel chains" and is often accompanied by a gender-based transport policy. According to Cresswell (2008), the key factors that manifest gendered mobilities were identified such as the distinct role of gender in family maintenance activities and place more responsibility on women than men in fulfilling these roles, leading to significant differences in the purpose of travel, travel distance, travel duration, transport mode and other aspects of travel behavior.

Critically, Levy (2019) uses an intersectional feminist research by examining how intersectional social identities of individuals go beyond a simple and binary understanding of gender, as well as race, power relations, effects upon their access to mobilities and modal choices. Women use public transport more often than men, but this relationship is never explored beyond the scope of
transportation planning. It has never been considered as an artifact or augmented as an infrastructure in any place comparable to a car as a target of desire and roads (and other related infrastructure) as a means of accommodating freedom. Cresswell & Uteng (2016) Ultimately, this broader theoretical background of gendered mobility provides a good framework for various reasons. Sensitive attention to the various subject situations (in this case, diverse users of public transport) and their different potentials and capabilities, it is important for this research to explore women's mobility patterns in response to new public transport services.

3.4. Theoretical background of Social Justice and Mobility as a Capability

According to Boschmann & Kwan, transport-based barriers can lead to social injustices and socio-spatial inequities in many ways, particularly, for a group of people with a specific race or class. Before I develop into the conception of mobility as a capability, I will define the concept of social justice. Feagin (2004, 29) argues that:

“Social justice requires resource equity, fairness, and respect for diversity, as well as the eradication of existing forms of social oppression. Social justice entails a redistribution" of resources from those who have "unjustly" gained them to those who justly deserve them, and it also means creating and ensuring" the processes of truly democratic participation in decision-making...? It seems clear that only a "decisive" redistribution of resources and decision-making power can "ensure" social justice and authentic democracy.”

Tim Creswell (2000) argues that social justice begins when people, regardless of gender, sexuality, respect each other and make them feel their place in the marginalized communities, open to them in terms of social participation. This ‘uneven geographies of oppression are also evident in people’s differential abilities to move’ (Cresswell, 2006, 741–2.) Tam Priya Uteng believes that mobility can be recognized as a capability. The capability approach to evaluate the mobility focuses on the individual wellbeing. This method highlights the importance of social and spatial mobility and identifies the importance of a neglected aspect of what is meant by transformation and existential mobility. Here, I define briefly the existential mobility. Robeyns (2003, 62) argues:

“As people are capable of moving between the temporary barriers of the space of the ‘inner self’ and social and geographical space. Potential and revealed movements create the intermediate space between self and environment (existential space), which is needed for the individual to imagine and to dread potential identities and future lives. Thus, existential mobility as capability seems to be intrinsic to knowing and acting upon what we ‘are able to be and to do.’”

Furthermore, Robeyns (2003) believes when mobility is regarded as an ability, it can be more conducive to research into mobility, ability, and gender, and thus reinforce the claim that mobility
is intrinsic to the wellbeing of men and women. The capability approach is defined as an extensive normative framework for evaluation and assessing well-being and social settings, designing policies and proposals for social change in society.

By looking at issues of mobility justice within this research, there seems to be a consensus emphasizing the adequacy of mobility as a vital capability existed in the Amartya Sen’s ‘realized capabilities’ model. Kronlid also defines this idea by identifying the relevance of the capability approach within the study of intersectional social inequalities and specifically for the gendered inequalities at the center of this research. The ethics of mobility has been highlighted based on the capability approach, mobility discourse, and feminist research synchronized in the mobility model (Cresswell 2006, 741-2) and the feminist political philosophy. The capability approach thus provides a useful framework to study gendered mobilities. This assimilation of gender, mobility, and ability identifies the ethical aspects of mobility in terms of social exclusion and social discrimination. This leads to a significant theoretical question related to the nature of mobility as a capability. Kronlid (2008) concludes that mobility is already being acknowledged in the “capability and mobility” study providing compelling reasons to consider mobility as well-being. However, research into the multi-dimensional nature of mobility suggests that mobility should be considered as a human flexibility.

3.5. Safety and Perceived Safety

What is laid ahead of mobility and accessibility definitions, there is a shift in theoretical views about the uneven commute with safety and perceived safety as instigated by Farrington, and Hui & Habib. Safety and access to public transport lead to a series of positive consequences such as wellbeing as well as participation in social transportation (Farrington, 2007). Hui and Habib (2014) argue that there is no doubt that insufficient access and having insecurity may lead to social exclusion which is a key issue for sustainable planning in public transport. Furthermore, mobility and accessibility are defined and implemented through objective measurements.

To understand the importance of perceived safety, it should be reminded that women use public transportation on a regular basis more than men. Personal security is vital for everyone and there is a positive correlation between perceived safety and public transportation. In other words, insecure feelings keep people away from using public spaces where crime or antisocial behavior are likely to occur including public transit areas, subways, bus stops, etc. Researches on criminology have shown that the perception of safety also differs significantly between men and women (Deniz, 2016). Feelings of insecurity and vulnerability to crime limit women’s mobility as a barrier to participation in public interactions.

Having looked at the theoretical framework of the capability approach, it can be deducted that perceived safety is also necessary to have a satisfactory experience when using the public
transportation, which includes access to public transportation systems, as demonstrated by Redman and Friman (2013). (Redman, Friman, Gärling, & Hartig, 2013) argue that the easy access to the transportation system easily increases the people's mobility, especially, for specific groups who are more vulnerable to crime or anti-social behaviors. However, the sense of vulnerability to crime and the perception of safety varies among people. Other studies also have shown the relationship between the women's insecurity and the use of public transportation (Loukaitou-Sideris, 2005). In an urban environment, women have the least access to public transportation. In addition, Lattman, Olsson, & Friman (2015) explain that the perceived accessibility was developed through identifying how to live satisfactorily while using a specific transit mode. Duchene (2011) points out that the problems of women's mobility as a social exclusion influence all aspects of their lives such as their financial situation and wellbeing.

3.6. New Paradigm of Mobility

In the new paradigm of mobility, Mimi Sheller and John Urry (2006) argue that the Internet has grown faster than any previous technology and has significant impacts on many parts of the world. Mobile phones that are directly connected to internet include new ways of interacting and communicating (Brown, Green, Harper, 2002). This model refers to the connectivity and internet as an umbrella which encompasses all the globe and there is no place left as remote and isolated. The growth of such ICTs (information and communications technology) allows new forms of people's coordination, meetings, and events to emerge. It seems that a new paradigm in the social science is framed by innovations created by technology (Verstraete & Cresswell, 2002). Some of the recent contributions to the formation and consolidation of this new paradigm include anthropological assistance, cultural studies, geography, immigration, science and technology studies, tourism and transport studies, and sociology.

Urry suggest that the term "network capital" to describe the mobility, in the sense of economic, social, or cultural capital in the sense of construction as economic, social or cultural capital, which realized itself well to an understanding of ‘mobility’ and ‘network’ as a distributed resource. It could be said that the right to mobility, as the right to the city. Scheller describes mobility as a way of measuring the capabilities of a movement that emphasizes how the move depends on the affordances of the environment in which we found ourselves in combination with our own abilities. According to Sheller (2018), all people have different capacities and potentials for movement, but in general it can be said that privileged groups control more potentials, enjoy greater ease of movement and can access to a wider range of different types of mobility.
4. Methodology

4.1. Methodological Reflection

In order to gain a deeper understanding of mobility strategy among women aged between 26 and 40 from a local and social context-dependent perspective, the thesis employs feminist methodological theories. In this way, the focus group and semi-structured method are especially used to study the concepts of everyday life and the culture of the people. Methodologically, the feminist method is likely to overlap with other concerns and perspectives of social research methods. Research projects can be considered as feminists if they are designed by feminist theory and aimed at producing useful knowledge for the effective transformation of injustice and gender affiliation. However, this does not mean that feminists should just study women or treat women as innocents of power abuse. Lykke (2009) argues that the core tenet of feminist research is knowledge production. From a critique of ‘authoritarian knowledge’ that emphasizes 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 knowledge, and thus the knowledge that is usually dominant in traditional research, belonging to social situations of power and privilege. Ramazanoğlu and Holland (2002) pointed out that feminist efforts to generate knowledge of social life by expressing statements about social realities. Research may help to clarify how changing gender inequalities can make a difference. But who should change them? How they should be changed? And why? These are the major issues.

4.2. Research Design

In order to find out the answers of the research questions of this project, a qualitative investigation of gendered experiences of daily mobilities has been conducted among women holding a responsibility to take care of a child and working in Lindängen. Regarding most of the theoretical fields of mobility, mobility of justice and gender inequality, the qualitative focus group method, semi-structured interview and statistics as toolkit have been used in order to collect data source, as well as to analyze this material. Parallel to qualitative investigation in the area, the study of gender inequality in public transportation and challenging travel factors among women is pursued. Regarding the multiplicity of restrictions that they face whilst traveling, Lindängen is analyzed in terms of capacity in transportation as well as the current projects running in it, particularly SUNRISE project. The new paradigm of mobility and its relation towards increasing social sustainability are explored. The following sections outline the research design and describe the methodological process in more detail.
In this part, the research methodology and details of the method used to collect and analyze the data have been discussed. This research follows a critical and feminist approach to analyze the consideration of gender barriers that are examined in this chapter.

4.3. Sample Size

This study was done with only 9 participants and it does not claim to be representative of women’s experiences in Lindängen, opting to illustrate some of the mobilities concerns of women. In order to respond to the overriding research questions and examine the new mobility paradigm and transport constraints of women in Lindängen, the participants have been selected randomly. Regarding the feminist methodological stance and limitation in some participants, it was preferable to focus on various participants with an intimate insight into daily travel. As such the study does not claim to offer a reliable source of primary data.

4.4. Interviews

Table 1: List of interviewees

<table>
<thead>
<tr>
<th>Interview no.</th>
<th>Age</th>
<th>Nationality</th>
<th>Work status</th>
<th>Focus group/semi-structured</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30-35</td>
<td>Swedish</td>
<td>Volunteer-Red cross- Lindängen community</td>
<td>Semi-structured</td>
</tr>
<tr>
<td>2</td>
<td>35-40</td>
<td>Swedish</td>
<td>Employee- -Malmö Stad</td>
<td>Semi-structured</td>
</tr>
<tr>
<td>3</td>
<td>30-35</td>
<td>Syrian</td>
<td>Employee</td>
<td>Focus group</td>
</tr>
<tr>
<td>4</td>
<td>30-35</td>
<td>Syrian</td>
<td>Volunteer-Red cross- Lindängen community</td>
<td>Semi-structured</td>
</tr>
<tr>
<td>5</td>
<td>26-30</td>
<td>Pakistani</td>
<td>Unemployed</td>
<td>Focus group</td>
</tr>
<tr>
<td>6</td>
<td>35-40</td>
<td>Iraqi</td>
<td>Volunteer-Red cross- Lindängen community</td>
<td>Semi-structured</td>
</tr>
<tr>
<td>7</td>
<td>26-30</td>
<td>Turkish</td>
<td>Unemployed</td>
<td>Focus group</td>
</tr>
<tr>
<td>8</td>
<td>35-40</td>
<td>Iranian</td>
<td>Employee- Health center Lindängen community</td>
<td>Semi-structured</td>
</tr>
<tr>
<td>9</td>
<td>26-30</td>
<td>Yemeni</td>
<td>Employee</td>
<td>Focus group</td>
</tr>
</tbody>
</table>

4.4.1. Focus Groups

In the focus group method, the dynamic group of discussions can direct individuals to define business problems in new and innovative ways and stimulate an innovative idea for this solution. The primary use of the focus group technique can be considered to help individuals to define
problems and work together to identify potential solutions. Madriz (2000) suggests that there are situations in which focus groups may not be appropriate because of their potential for causing discomfort among participants. When such discomfort might arise, an individual interview is likely to be preferable. Situations that may be unpleasant are when intimate details of private lives need to be revealed, when participants may not be comfortable with each other present. Furthermore, the most frequently mentioned problem is the perceived lack of generalizability (Sudmen & Blair, 1999, 272). Results are not always reliable indicators of the reactions of the wider population. Criticism is also made of the unsystematic nature of the sample, which is not as precise as probability sampling.

In focus groups, participants are able to bring the fore issues related to a topic that they deem to be important and significant. However, the technique allows the researcher to develop an understanding of why people feel the way they do (Bryman & Bell, 2015). In a normal individual interview, the interviewee often asks about his or her reason for holding a particular view, but the focus group approach offers the opportunity of allowing people to probe each other’s reasons for holding a certain view. This can be useful than predictable questions followed by answer approach of normal interviews.

The interview focus group method conducted with four people in English or Persian languages, which suited the participants and it was conducted in a quiet proper space in Lindängen. Some participants were working as volunteers in Red cross and two others were citizens of the area, randomly selected. In terms of gaining access to the participants, there were several central means of meeting the desired individuals, semi-structured interview and focus groups. For example, a focus group included a Pakistani woman, Yemeni woman, Turkish woman, a woman from Syria and these women were well informed about the project. The participants of this research manifested themselves in this current study since it was easy to connect and communicate with the other potential participants. After understanding the research process, they were more than comfortable to participate in the study.

4.4.2. Semi Structure Interview

4.4.2.1. Data collection, in-depth interview

Semi-structured interview method has been used because it often precedes observations, informal and unstructured interviews, allowing researchers to provide a thorough understanding of the topic of interest for the development of meaningful and semi-structured questions. According to Bernard (1988), it is the best method to use when there is not more than one chance to interview someone, and when there are multiple interviewers to collect data.
Due to the nature of the study, the interview with the participants is the preferred method in feminist research methodology because it allows for the exploration of voices of marginalized, gender blindness groups. The visual observation of intricate daily travel, behavior, and responsibilities of women is particularly private and requires a proper research method. Acquiring the trust of the participants was thus an important factor to collect data. One of the main sources of collected data was a set of a semi-structured interview and accompanying set of reflections regarding their gendered experience of mobility including a sense of safety, desired destination, the convenience of travel, mode of transportation and accessibility. In order to capture the complexity of travel behavior and mobility pattern of women, detailed interview with different women was conducted in terms of class, religion, nationality, race, education level, different political views, and different social behavior.

In addition, several one-by-one interviews with each of the participants with different background were conducted individually. The interviews were carried out with 5 people in the spring of 2019. At first, the background and basic information on each of the participating women were collected. Subsequently, they answered a set of simple questions about their attitude and concerns relating to their experiences of mobility and transport in Lindängen. In order to gain a deeper understanding, the participants were allowed to discuss their views and perspective in order to guide the conversation. The whole interview was recorded, particularly some interesting relevant insights. The flexibility of the interviews allowed to dynamically engage with the material. After the initial reflection on mobility and transportation experiences, the participating women explained their mode of transportation, household, and employment responsibilities and sometimes their experiences and concern regarding using public transportation. The duration of each interview session was one hour or less, and it was conducted in a quiet proper space in Lindängen. In order to understand sustainable mobility progress (SUNRISE project), an interview was conducted with Joanna Christensson in Malmö Stad.
5. Empirical Materials

5.1. General finding

What type of barriers and restrictions can be related to women's mobility patterns? This research aims to answer this question. To answer this question, the findings are presented and analyzed in this chapter. In order to understand the barriers and women’s restrictions related to transportation general outcomes are given as the findings, along with the theories presented in the literature review and the background information about the new paradigm of mobility. The goal is to interpret the research results through a conceptual understanding of the sharing economy to understand the mobility justice and access to equal resources as well as the increase in the social knowledge alliance. The general findings have been captured from a semi-structured interview with some staff and residents in Lindängen as well as an interview with Joanna Christensson, led to a project with the main idea of sustainable mobility.

Having looked at how theories of capability, mobility, and lack of accessibility present themselves in the field of transportation that impact on social justice and consequently leads to social exclusion and segregation. So, it should narrow down the scope of the mobility justice analysis to the transportation disadvantaged and justice. The conception of transportation justice that can be considered as the socio-political movement to overcome the insufficient distribution of transport access, and social exclusion.

The thesis implemented several studies in order to investigate the diverging travel factors among women in Lindängen. The research increasingly focuses on how gender, demographics, and environment affect transport needs, behavioural theories, databases, and model structures, as well as affecting different behavioural factors among women. The research findings are divided into two parts. The first discussion is the analysis of the study of diverging travel factors among women in Lindängen, along with the focus group and semi-structured interview analysis. Furthermore, in the analysis part, the EU project called SUNRISE is explored that promotes sustainable mobility in Lindängen. After investigating this project and analysing the feedback of citizens, the project concluded that it should develop pedestrian and cycling routes. The projects are struggling to encourage residents to participate in social activities through activating the public space.

The second discussion increasingly focuses on how solutions can be provided which would suit the current and future sustainable transport in terms of accessibility and feasibility. In regard to Lindängen as an immigrant's marginalized area with varying citizen-managed activities, it is necessary to bring an integrated, more collaborated plan to access equality to resources. So, the thesis examines new paradigm of mobility and brings idea of sharing mobility.
5.2. Diverging Travel factors among women in Lindängen

According to Meyer (2006), obviously changes in employment structures, the division of household responsibilities and the new household structures contribute to a more similar pattern in travel patterns for men and women than in the past. However, there are some strong opposition forces. First, social tendencies, such as increased employment among women, do not always close the travel gap between men and women. Second, the role of households is changing much faster.

Demographics and urban planning of Lindängen impact on the accessibility through different modes of transportation. Whilst the transportation mode of residents really relies on bus, cycling and walking in Lindängen is affected by the nature of the neighborhood. According to Christensson & Geppert (2017), the neighborhood has a bicycle infrastructure that is avoided by citizens after dusk because of its isolated character. People are not comfortable going outside and waiting for the bus, especially in places where people do not feel safe. Before delving into the next part, I briefly zoom out to remind the actual travel behavior and Modal Split in 2013 and anticipated modal shift changes until 2030. Regarding the modal split, Malmö and Fosie latest survey 2013 and 2030 objectives are compared. Two graphs generated from the table found in the website of SUNRISE have been plotted below to give a clear view of the comparison of Malmö and Fosie latest survey 2013 and 2030 modal split.

![Actual Travel Behaviour and Modal Split2013](image.png)

Figure 2: Actual Travel Behavior 2013
Figure 3 illustrates Malmö’s modal split target by 2030 as well as for each SUMP (Sustainable Urban Mobility Plan) region. The Malmö Urban Sustainable Mobility Plan was approved in 2016 (SUSTAINABLE URBAN MOBILITY PLAN, 2016). Walking, cycling and public transport should be a natural choice for all those who live, work and travel to Malmö by 2030. To achieve this goal, the city’s surface was broken down into 15 sub-areas that share comparable accessibility characteristics. Fosie is a sub-area of which Lindängen is a part of it. According to Christensson & Geppert (2017), the result of the 2013 travel survey is shown (figure 2). The specific division covers all trips that residents make in and out of areas. Lindängen is part of Fosie's SUMP area 7. Comparison between Malmö’s total modal split changes and this area illustrates that the challenge for Fosie consists of significant reduction in car use, an increase in the use of public vehicles in the present time, and an encouragement to use bike. Residents in SUMP area 7 make fewer trips (2.3 per person) compared to the city average (2.6 per person). However, the low car ownership of Lindängen (compared to the Malmö and Fosie averages) may show that the use of the car is also lower than in other SUMP locations. Since Malmö Stad is focusing on the development of pedestrians, the raised question here is how to facilitate sustainable travel in a neighborhood where people's choices for mobility are determined by high levels of security.

![Anticipated modal shift changes until 2030](image)

Figure 3: Anticipated modal shift changes until 2030

### 5.2.1. Employment Disparities

Rosenbloom (2004) argues that men and women may have different experiences with their participation in the labour market, and the most important factors that affect it are:

- Income
- Employment
- Part-time and flexible workforce
As the first reason, women on average earn less than men even if they share the same occupations and responsibilities. The second main reason deals with the changing nature of the economic foundations in the most developed countries (Sue & Santiago 1998). For instance, there are some perceivable differences between low-income women and men in their patterns of travel. Obviously, many private sectors are low-cost and offer little opportunities for improvement. Therefore, the growth of employment in the service sector has led to an increase in the number of women working in poor and insecure industries. It is worthwhile to mention that almost 60% of women are employed in service industries (Guy & Newman 2004).

This chart\(^1\) illustrates the proportion of gainful employed people in both Lindängen and centrum of Malmö in 2017. The data found in malmö.se/statistik encompasses a wide spectrum of people in terms of age brackets (20-64). In order to understand the situation in Lindängen, the study includes some data for centrum for the sake of comparison. In this comparison, centrum of Malmö has been identified as an area with better quality based on the socio-economic measures. The statistic is based on data from the so-called “control task register”. Anyone who pays wages, fees, remuneration, and other benefits that constitute taxable income must report control data. The definition is the same as in the Labor Force Survey (LFS): for wage earners, you must have worked at least one hour a week during November. Instead, for personal entrepreneurs, income from active business activities is counted during the year. Even those who are temporarily absent from employment during the measurement period, e.g. due to illness, counted as gainful employment. People with very low incomes are not considered to be employed.

The chart (Employment rate 2017) shows the gap in the percentage of employed women and men in both areas which gets smaller due to an increase in the employment of women. The percentage of employment rate for men and women is 54% and 50%, respectively, in Lindängen. So, there is

\(^1\) Data is derived from SCB RAMS (“Register-based labor market statistics”).

Figure 4: Employment rate 2017
a high demand for well-organized transportation for women that meets their family responsibilities. The figure for man and woman in the centrum of Malmö is 73% and 72% respectively. Clearly, people in this area can spend more budget so they have access to more options for transportation. According to the analysis of interviews, in contrast, there has been some claims stating that some adult students (komvux for adults) just finished pursuing their studies due to their economic situations which made them unable to recharge their bus cards. This economic restriction impacts on the percentage of people to be able to educate in Lindängen. Also, some interviewees believe that the fees for using public transportation is relatively expensive. Take, as an illustration, an Iranian woman who works in the health center of Lindängen, who clearly states the price of commuting by train and bus is expensive in comparison to the car and using private vehicles is more affordable. The required time for traveling between work and home is another concern. So, she doesn't want to spend 4 hours of her time on traveling between work and home.

Furthermore, the dependency on bus impacts on the type of jobs that women can apply, especially, in Lindängen, So, based on the statistic, the lower rate of employment in the area is reasonable. Lucas (2012) argues that employment status is an important factor in determining the space-time geography and potential time-constraints of a given individual or group. It can be deducted that, although being employed makes women likely to travel more, and to depend more on the private car to do so, aspects of the level of considerations of their travel patterns may differ from men. Many of the women work in various industries and places that differ from most men and despite that they still they have a lower average income. Their family responsibilities continue to be a major contributor or even a limiter to their types of job and travel patterns.

5.2.2. Education

Since Lindängen suffers from a low education level, collecting information appeared to be a challenging issue. So, the study investigates the education issues in both regions. Figure 5 below is based on the data found in malmo.se/statistik shows the percentage of residents in the centrum and Lindängen who have the post-graduate level. Level of education indicates the highest level of completed education for individuals. As it can be seen, there are four categories. Pre-secondary education includes up to 9 years of pre-secondary education. High school education includes both the current standard 3-year programs and shorter high school programs. The third category, post-secondary education includes those who have post-secondary education regardless of the length. The last category or "Other" includes those individuals where data is missing or are not registered in the educational system. The division is based on the categories in SUN2000. It applies to the population 20–64. The variable is divided by gender.
This chart\(^2\) (figure 5- Education 2018) highlights a remarkable increase of students in high schools (a.k.a gymnasial) around 44\% that implies a great demand for a safe and efficient transportation for Lindängen in comparison to 27\% for the centrum of Malmö. The highest proportion of students for the centrum is related to the post-secondary education level (Eftergymnasial) which is approximately 62\% and puts it considerably ahead than Lindängen with only 27\%. This low figure in the post-secondary level for Lindängen could be an alarming fact. On one hand, it implies a low chance for the residents of this region to find a job in the Swedish labor market where academic degree has become an important requirement. On the other hand, it contributes to losing opportunities in terms of wellbeing and social activities due to lack of information.

\(^2\)Data from Statistics Sweden’s education register (UREG).
The Behavior model showing the hypothetical links between urban structural, individual and social conditions, accessibility to facilities, rationales for activity participation and location of activities that led to total traveling in an area. The results of one of some studies that showed how residential location influences daily travel differently among women and men: a comprehensive study of residents of the Copenhagen metropolitan area, Denmark. A more detailed description of this study is given in Næss (2006a). The research is informed by concepts and perspectives of the geography of time, location theory and the sociology of mobility. These differences still appear to be greatly the result of socially constructed gender roles. Owing to the urban environment and green space of lindängen, the behavioral travel modal of women relies heavily on the residential location and urban structure. Gender differences in travel are partly seen as derived from differences in activities and responsibilities and partly as generating from differences in access to, as well as attitudes towards, different modes of travel.
6. Analysis

This chapter will analyze the results from the focus group and semi-structured interview, and then discuss the results. Firstly, the results are presented with a brief description of deep interviews that have been collected by the qualitative research method in order to critically examine the mobility patterns of these women. Subsequently, the thematic analysis is discussed, which mainly focuses on several main factors that have emerged from both the collected research material and the theoretical framework. Synthesizing the mobility pattern of the participants, these themes express both their attitudes emerged from temporal and spatial consideration of mobility, socio-economic option, easy to catch transport, frequency, schedules and consideration of transport-related new paradigm of mobility.

The questions in the focused group method and semi-structure interviews were designed based on issues concerning general mobility. For instance, the type of transportation, the reliability, and safety of these modes, accessibility, economic considerations, and convenience. Some participants are members of Lindängen community. They work as volunteers for Red Cross and make handicrafts. It is worth pointing out that none of them drive and only one has a driving license. Two women who participated in the semi-structured interview are working in the health center of Lindängen. They commute every day to Lindängen and they use a car to reach Lindängen. Apart from the two Swedish females who voluntarily participated, the rest of the participants are identified as long-term immigrants.

The results are according to a random selection of participants. In order to produce a natural result, the study is struggling to go deeper of the mobility pattern that has been chosen by the participants. For data collection, the participants have agreed to provide their mobility data for this research. For the sake of their privacy, their names would not be mentioned.

6.1. Focused Group Interview Analysis

These interviewees included four people with different nationalities. A woman from Syria who has been living in Malmö for 10 years. She lives with her husband and they don't have offsprings. Her main mode of transportation is the bus, but she has access to a car, and she has received a driving license for more than 10 years. She has eyesight problems and did an operation on her eyes. She claims that finding a parking spot is not easy. Consequently, she must go a little bit further than her destination. She expresses her concerns regarding the idea of biking in the bad weather, dark night, and the inconvenience of shopping. The women who participated in the interviews have been chosen randomly and they are not relatively new in Malmö and are considered as long-term immigrants. The rest are some Swedish citizens who are familiar with locations and activities outside the usual bus routes.
Most of the participants state that their transportation relies heavily on the bus and reminded some occasions when this reliance has resulted in various problems. Arriving late for school and being refused to attend the class is one example. In some cases, the mental pressure due to the necessity of arriving at the proper time as childcare or an employee was among the unpleasant experiences. Most of the participants claim that they avoid waiting for a bus in bus stops for a long time particularly at nights.

Another participant from Iraq was able to speak Persian. She has been living in Malmö for more than 12 years. As a housekeeper, she takes care of her children and household activities whilst her children are full-time students and travel mostly using the bus. Likewise, she prefers to use only the bus. Surprisingly, she even claims that some adult students (komvux for adults) just finished pursuing their studies due to their economic situations which made them unable to recharge their bus cards. Karin, a Swedish woman, who was pursuing the discussion said that Pensioners from the age of 70 receive a 30 percent discount for the bus card. It seems other participants did not know about that. Furthermore, they express that the idea of biking in the bad weather would be impractical with this transport mode. In particular, women with small children are often confronted with certain threats by certain cyclists who express their machismo by imagining they are competing in the Tour de France as they speed carelessly through busy pedestrian areas.

6.2. Semi-Structured Interview Analysis

I conducted a semi-structured interview with more specific questions regarding the exploratory, qualitative nature of this research. I have decided to focus on the real concerns of women related to transportation. This enables me to collect in-depth, and sincere insights into daily mobilities of women with the age 26-40. Owing to the key views of feminist research and knowledge production that permeate this research, the opportunity for the participating women and contribution to their own production of knowledge was of particular importance. Trusting a participant’s answers was an important task that enabled the study to address problems effectively. In addition, given the time constraints and resources for this master's thesis, focusing on real participants provided realistic data through which my research questions were built on.

The participants of this research constitute five women within the age bracket of 26-40. A Swedish woman who participated in the semi-structured interview always uses a private car due to its convenience. However, the rest of the participants avoid using a car because this mode of transportation is out of their budget. In addition, finding a good spot for parking is not easy. This was in total contrast to the Swedish woman’s opinion who insists that finding a parking spot is not a problem. ‘You can find a parking spot by using some apps that made this process simpler and faster’, she said. By using the app and traffic information, more routes are accessible, while there are congestions in other routes. Nevertheless, she does admit that her mode of transportation is not
environmentally friendly, and she must rely on her own car. However, she stated owing to the price of current electric cars, she is interested in using hybrid vehicles as they are a good compromise in terms of price, comfort and carbon footprints. Other participants such as the Syrian woman who also participated in the focused group interview, mentioned that she is interested in electric cars, but it is out of her reach because of their current price. Due to the result of the interviews with this age group from different backgrounds on the ground of education and social class it contributes to transport poverty. The Syrian woman has access to a car and is holding a driving license for more than 10 years while she still relies on only bus.

Another participant, an Iranian woman who is working in a health center in Lindängen uses her own car because of its convenience. She has never taken the bus or the bicycle. She said that she would consider taking the train to visit her friend who is very far away. She, however, feels extremely safe and comfort when using her own car. In reply to the question about electric cars, she expressed that electric vehicles are the ideal mode of transportation while there are some issues associated with them such as the range of cruising and the lack of enough charging stations. She is willing to buy a new electric car and she did some research about the sustainability and environmental aspects of these types of cars. However, the appreciable distance to a charging station was a stumbling block for her purchase.

6.3. Thematic Analysis

After the theoretical framework of gender inequality, mobility justice, social mobility and subsequently using a qualitative methodology of data collection, it is now time to approach the thematic analysis of data material collected and presented from participants. Through a geographic visualization and using focus group and semi-structured interview, three key themes have emerged as particularly significant in the study of gendered daily mobility in Lindängen.

Firstly, the spatial issue of mobility, the consideration of distance and space in Lindängen leads to the restricted and limited accessibility to socio-economic activities. This spatial consideration and visualization contributes to an understanding of social segregation and marginality commonly related to residents’ experiences and their concerns related to transportation in Lindängen. Second, the temporal consideration of mobility, the irregularity of transit time in the Lindängen using bus 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 childcaring. Some interviewees claimed that the irregularity of transit time impacts in their daily activities. Finally, integrated policy and plan have a crucial role in policy and planning in the transportation system through analysis of the interview results and analysis of simultaneous constraints (transport poverty, lack of mobility justice, and social justice). The consideration that impacts upon mobility and accessibility of participants in Lindängen, the study paying close attention to the new mobility paradigm that leads to promote sustainable mobility.
6.3.1. Spatial Issue of Mobility

This perception of distance is determined by the level of access provided by the public transportation system, which in turn affects the behavior of local residents in the daily transportation system. According to the analysis of the study, daily mobility of women and some visual geography of Lindängen, we will find that this perception of separation contributes to and intensifies the condition of social segregation within wider Lindängen.

Another constraint on mobility for participants was the limitation of possible or potential new destination available through their mode of transportation options, which could be only bus and no direct access to the railways, so there is no direct link to Lindängen by train. There is one accessibility to Lindängen by train, taking approximately twelve minutes to reach Syd Svågertorp station by foot. In Syd Svågertorp station, a commuter should transfer to bus number 33 that departs every 30 minutes to reach Malmö Tenorgatan in Lindängen. Christensson & Geppert (2017) argue that according to some analysis of traveling statistic, there is a high share of Lindängen’s population employed in Denmark (11 percent compared to 8 percent for the total of Malmö population which makes commuting routes to the train station in Hyllie). Based on visual geography documents, there is also a lack of accessibility in the central and southern part in Lindängen by cars. Furthermore, another restriction of mobility is that there is consideration of personal safety within public space, as a critical feature of gendered mobility and accessibility to public transportation. Looking back at the theoretical framework of the impact of personal safety within public space, it leads to an increase of the distribution of accessibility to peripheral districts and deprived areas. Access to diverse activities across a wide variety of destinations and peripheral districts in Lindängen is an important transportation planning priority.

6.3.2. Consideration of Social Identities

By way of research, the thematic analysis of spatial and temporal consideration of daily gendered mobilities, and available public transportation system, it is an important value to observe how the variety of barriers lead to wider social segregation. The social identities of participants are important and how this background contributes to a certain concerning their daily mobilities and access to opportunities. By way of synthesizing of the interview analysis in Lindängen, there is a strong correlation between an accessible public transport system and the implementing of social various activities through Lindängen. It is important to use a sensitive, yet delicate understanding of the various identities and social situations in understanding issues of motivation and social cohesion. As a result, it is necessary to identify the participant's simultaneous and mutual identity beyond gender. Yet the critical value of the study is the understanding of diverse gendered identities and social positions when the investigating of mobilities pattern and social integration. This infers that one should recognize the participants' intersecting identities that reach beyond gender. The intersectional identity of participants such as foreign backgrounds, long term
immigrants, unemployed, financially unstable and diversity in religion highlight the various
degrees of power and inclusivity related to social positions within the deprived area. Clearly, it
shows how the women concern about injustice or some restrictions or barriers to equity than others,
contributing to accentuate the underlying factors that lead to social exclusion. By referring to the
statistic about education, employment rate, and foreign background it contributes to the
understanding of social identity in Lindängen.

As the diversity of social identities beyond gender among participants have been recognized as a
restriction to access to public transportation leads to social exclusion. Regarding the fact that only
two people of the participants were Swedish nationality and the rest came outside of Sweden, they
are already arguably perceived as ‘immigrant’ in society. Having fact that riding a bicycle and
driving car give them independence and high flexibility and accessibility to reach to new
destinations, seemingly it backing to certain socio-cultural limitations. Furthermore, according to
the statement of participants in interviews , some participants do not know how can load money
for their smart card and have to felt unwilling to learn the driving car, riding a bicycle and using
an app for increasing to charge their smart card. This capability restriction associated with the fact
that some participants suffer low education. Regarding temporal consideration, some participants
expressed their concerns to use a bicycle for different destinations, unsafety cycling paths, cycling
stations and the challenging weather in Malmö.

Many spatial and temporal restrictions emerge due to relying on bus services in Lindängen. It was
a Swedish woman that drives her car, expresses the most freedom and access to opportunity and
flexibility to do her daily and social activities. Having noted that most participants are mid-age
women 26 to 40 years old, lack of confidence and experience of using a bicycle as the main mode
of transportation for daily activities impact their mobility behavior. The Syrian woman, despite
access to a car and also, having a valid driver’s license for a number of years, relies on the bus due
to her experiences of mobility and some confusion about regulation in driving a car in Swedish
society.

6.4. Analysis of SUNRISE, Neighborhood Mobility Dossier of Lindängen

SUNRISE’s innovative approach relies on the individual involvement of its citizens, stakeholders,
and users at all stages of the innovation process, from early identification of problems to
implementation of solutions and their evaluation (Christensson & Geppert, 2017). The solutions
are assessed through the "Laboratory of Mobility" in six cities including of Samos, Bremen,
Budapest, Jerusalem, Malmö, Southern Angle, and Thessaloniki. SUNRISE Laboratories is the
mobility of community based Sustainable Neighborhood Mobility Planning (SNMP), which in
turn is based on the concept of Sustainable Urban Mobility Planning (SUMP). SNMP, in close
collaboration with a local partner and citizen organizations, implements transportation measures
and participatory approaches at the neighborhood level.
The Lindängen bike map (figure 7) shows the challenges for Lindängen, which significantly reduces the use of cars, increasing the already high use of public transport and encouraging walking and biking. This network of bicycle paths runs through the neighborhood and links Lindängen with other parts of town (indicated by blue lines in the figure below) there is also the route to the city center through the neighborhoods Hermodsdal.

Figure 8 illustrates the car routes that run around the neighborhood of Lindängen and connects Lindängen with other parts of the city (shown in green lines in the rectangle below) the route for the bus visible alongside the green lines. Significantly, the lack of accessibility inside of Lindängen is visible. According to the result of an interview with Joanna Christenson, no development in
terms of transportation’s construction for routes of car and bus will be happening inside of Lindängen. Lindängen has an approach to building a new Högaholmsskola, and between 200 and 300 new homes are to be built. The question is how much the current infrastructure can respond to transportation demand?

According to the statement of Joanna Christensson based on the finding of SUNRISE, this project involves creating local strategic alliances through participatory identification of problems, needs, ideas, and opportunities in each area of SUNRISE activity. However, since different traffic modes are separated from each other, cycling routes are separated through a park-like but isolated area. While many Lindängen residents enjoy the car-free environment, the separation of pedestrian routes and cycling from the streets can be somewhat difficult to locate within the neighborhood, and as they go through isolated and sometimes desolate areas, it can contribute to a sense of insecurity.

Before coming back to the project, I review and analyze feasibility studies to facilitate and create results in accordance with the ideas collected and problems with existing resources directly or indirectly through involved stakeholders in Lindängen. According to Christensson & Geppert (2017), the city’s own station-based bike-sharing system, there are 50 stations in Malmö. An annual membership fee of 250 SEK that provides a popular cycling opportunity among residents and visitors. There is no station in Lindängen yet. According to thematic analysis and the research of Sunrise project, extending the bicycle sharing system in Lindängen leads to increase accessibility. There are 93 station-based car-sharing pools, one of which is located in Lindängen (currently with only two subscribers). Studies have shown that car sharing in semi-peripheral areas such as Lindängen (Wennberg et al. 2018) has its limitations. The car ownership in Lindängen is rarely lower than in the other area in Malmö average (220 cars per 1,000 inhabitants compared to the average of 255 cars per 1,000 inhabitants) and lower than the average in SUMP area 7 Fosie (237 cars per 1,000 inhabitants) included Lindängen. According to the analysis of the focus group and the semi-structured study, parking is a big challenge for residents. While women keen to use the car because of the convenience of the car, they complain that their dependence on the bus increases the restrictions to engage in public space. Parking in Lindängen costs 10 kroons (1 euro) per hour and 60 kroons (6 euros) for a 24-hour day. Residents also have the option to spend 30 days for SEK 375 (€ 37.50). This is relatively average compared to the rest of Malmö.

Christensson & Geppert (2017) state that the neighborhood bus system is well developed and contributes to the connection of other parts of the city and the regional public transport system. Regarding the high demand of users and the increase of capacity, it needs an infrastructure plan and integrated solutions. Among the participants' comments on biking, parking issues and the risk of bicycle theft happen again, they avoid using the bike. The feeling of insecurity prevailed leads people to ride their bikes along with traffic at Munkhättegatan instead of using the bicycle network available through the park. People avoid biking, others simply did not find themselves somewhat
isolated on bike networks. In addition, the need for better cycling inside and out of the neighborhood has been demonstrated. Some participants mentioned that they do not know how to ride a bike.

According to thematic analysis, focus group and interview analysis and finding of SUNRISE project, the real and perceived insecurity is a topic that directly affects the selected mode of transportation. The neighborhood has a bicycle infrastructure that is after the darkness is avoided by citizen because of an isolated character. People complain that they are not comfortable going outside and waiting for the bus, especially places where people do not feel safe and can be activated and repopulated through events, celebrations, and movements. Joanna Christensson and Kerstin Geppert(2017) argue that many physical and structural changes have long been discussed and planned (for example, municipalities) that are on their way, however, there are not many projects that have gone from the planning to the implementation stage. The result is that local actors are supposed to take off and are not prepared or incentivized to create something new, for example, property owners depend on the process of building a municipality to carry out any physical activity. They do not want to invest in the progress that needs to be removed, or when the risk involved construction finally begins. So, the project highly engaged to promote motivation. Furthermore, the area has a young population contributes to the promotion of knowledge alliance. So, it is necessary the collaboration among stakeholders involved in the process such as the local community center, (Allaktivitetshuset), a health center in Lindängen, the nonprofit organization F4, Stena Fastighet and MKB and etc. (Stena Fastigheter is one of the real estate owners in the neighborhood and is responsible for bike stands on their land). Other big actors are Trianon and Victoria Park.

Another important reason for promoting of public space is the need to create a sense of ownership among actors that could contribute to resources, such as direct links, property ownership, insights and experience with local conditions, and so on. By doing so, it makes able to provide the ground for the successful implementation and maintenance of the mobility solutions which the study suggested. Due to the high potential for investing in the new paradigm of mobility in Lindängen, the study will discuss the impact of sharing mobility in the deprived area.

6.4.1. Lindängen and the next step

Large spaces of greenery that are neither parks nor squares create unsecure places between buildings in Lindängen (Hammarlund & Kjellgren Schönning, 2013). Related solutions may not be entirely within the domain of municipal responsibility. So, Lindängen needs an integrated and inclusive solution. Remarkably, given that planned actions from SUNRISE project are between 2019 and 2020, the thesis does not assess the planned actions in Lindängen.
SUNRISE has been defined the fields for actions are broadly and in the next process. The neighborhood residents have an effective role in identifying the fields, strengthening, and selecting measures. Due to the feasibility analysis, they settled on three actions (Christesson & Geppert, 2017).

1- **Bike parking co-creation lab:**
- To co-plan and coordinate measures for at least one bike parking
- To facilitate work with real estate managers and Hyresgästföreningen.
- To plan together to engage with residents and take joint action for safer bike parking facilities.

2- **Activating urban space co-creation lab:**
- To co-planned and co-promoted measures for one reclaim-urban-space
- To participate with Allaktivitetshuset representatives in facilitating the activity.
- To take action to activate the urban space with young people (especially young women) and adult men and women.

3- **Reclaiming urban space co-creation lab:**
To co-planned and co-developed measures for one reclaim-urban-space testbed area to be implemented.
- To participate with Allaktivitetshuset representatives in facilitating the activity.
- With families, with young children, make plans to regain urban space for pedestrians, kids, and cyclists.

### 6.5. Smart Mobility & Lindängen

According to Mimi Sheller and John Urry (2006), the new paradigm of mobility emphasizing that all places connected to the network means that no place can be an island. Mobile phones, based on the many communities that are directly connected to this new technology, appear to include new ways of interaction and communication. In this respect, I bring the idea of smart mobility.

#### 6.5.1. Smart Mobility

Why do we need smart mobility? As cities grow, the burden of urban transport systems increases. Undoubtedly, in 20 years since the widespread adoption of the World Wide Web, and for decades or more since the advent of smartphones, this technology has changed several aspects of daily life in less than a generation and has led to a situation in how to organize work patterns, shopping, and socializing, as well as information that is currently available, while physically mobile is not only identifiable from a few years ago. (Castells et al., 2014; Wang et al., 2016). Like any complex economic and social system, the mobility system can be reinforced as a series of related changes, but in several different areas, such as technology, economics, institutions, behavior, culture, environment and belief systems (Rotmans et al. 2001). What possibilities do women have to keep
being mobile in our changing societies? And, why attempt to answer this question through the notion of smart mobility?

Smart mobility concepts go beyond technologies and need to integrate also social and political aspects. Remarkably, the real challenge today is not just understanding future issues as predictors of the past but understanding the future population dynamics and the potential impact of technology (and other effects of the formation of behavior). Therefore, in confronting this situation, we have to innovate in our daily movements. The concept of smart mobility encompasses a wide range of modes of transportation: kick scooters, bicycles (regular, electric, foldable), buses, light rail trains, subways, streetcars, taxis, autonomous vehicles, walking… the list is growing. In addition, users have the option of owning or sharing. Two more aspects of smart mobility are accessibility and social benefit, which means that it should be affordable for everyone and help provide a better quality of life and:

- More time to do important things in life by spending less time on traffic
- Flexibility to use the convenient shipping mode
- Safer Shipping System
- Better use of transportation assets
- Less use of resources such as land and fuel

While these innovations are often as reducing the cost of mobility to many people particularly women, and as well as their potential to create more benefits for society and the governments. It leads to release of the lost, travel time to be used for activities that are economically productive or prosperous, these outcomes usually being driven by the technology sector by pushing the smart transition to secondary or residual effects (Blanes et al., 2015). How smart mobility could contribute to increasing accessibility among women? Knowing the fact that in focus group interviews, some participants claim that using online websites for shopping becomes more popular. Furthermore, it is more convenient to choose and browse among more items particularly clothes. This is why Lindängen needs an integrated and inclusive solution and it should become part of the smart mobility network. Lindängen has a young population and growing demand for users need to evolve in terms of transport infrastructure development and strengthening social capital. Due to meet the needs of mobility in Lindängen, the master thesis provides the idea of sharing economy. The sharing economy relies heavily on the socio-economy transformation as well as socio-culture networks.

**6.5.1.1. Smart Mobility & MaaS-Simplifying Transportation**

According to Hessel (2015), smart mobility is a powerful tool for achieving a sustainable future. Imaging that having a program that connects all available transport, such as taxi, public transport, cars and even bike costs to a mobile service (“MaaS - simplifying transportation”, 2016). Whim program allows to consumers to do exactly what they once or jointly purchase accurately. Whim
is part of MaaS Global, a Finnish company that integrates various modes of transportation, both public and private, into a concept known as mobility as a service or MaaS. MaaS aims to provide an easy, sustainable, and affordable alternative to automotive and business activity by allowing users to purchase the exact mobility services needed. MaaS is a combination of the use of technology with transport and infrastructure, so it is easy for cities and, most importantly, people who live in it. In Sweden, Ramboll has played an important role in MaaS's early success, offers extensive programming and planning, an essential element of the MaaS concept.

6.5.2. The Mobility Strategy of Malmö Stad

In order to promote the development of the urban environment and to achieve new and challenging goals, for example about changing modal shares, clarity about what traffic helps and how it is needed. In terms of priorities, the city of Malmö has to focus on objectives that are suitable for everyone meanwhile be most beneficial for those who need them ("SUSTAINABLE URBAN MOBILITY PLAN", 2016). Designing a city featuring denser and more integrated urban zones access makes cycling and public transport more logical and more equitable. Measures dealing with the promotion of pedestrian traffic indicate a clear preference for most people regardless of age, gender and income. As an important factor, prioritizing is a specific aspect of transportation for increasing equality. A city with an asymmetric division of traffic routes, especially where street-based transportation is dominant, poses a serious limitation for the ability of citizens to commute on a daily basis. In general, a higher portion of men have access and use cars than women; hence, their accessibility to different parts of town is greater. However, other modes of transportation such as using bicycle can compensate for this to some extent.

Having look at the sustainable mobility in Lindängen, one of the strategies that we should use that which I find useful in focusing on our transportation planning, is the availability of accessibility planning for the diverse needs of the communities and people who make up our population (Geurs & Van Wee, 2004). This development represents a major change in how the local government is managed and tailored to its needs. One of the initiative planning, to try to raise awareness and understanding of these issues was to develop gender equity and encouraging sustainable transport. This is a simple working tool intended for those at the local level in planning and delivering transport services and the pedestrian environment. Furthermore, transport planning decisions that do not reflect the balance of work and life of many women, for example, childcare responsibility, keeping a full-time job and taking care of healthy parents.

6.5.3. Environmental Public Transport

Regarding massive cyclist routes in Malmö and sustainable development running in the background, the idea of using electrical bus becomes more sensible. Lindängen definitely is accessible with cycling routes while suffers from the inconvenient cycling routes. In order to
understand the potential of this idea and its required infrastructures, we should employ the smart mobility initiative. With the advent of autonomous vehicle, there would be some involved risks which will be increasingly more apparent ("Driver-less public transport", 2018). For instance, Ramboll in Albergh in Denmark assists the Council in identifying electric buses and buses for driving on public roads in conjunction with cyclists. Buses have various features to help them on their way, including GPS, lasers, radar, and cameras. They have a maximum speed of 45 km / h and will carry up to 15 passengers along the 2.1 km route. One of the main objectives of the project is to provide further access to an isolated area, and you can easily access residential areas for public transport and other facilities. If approved, the project will also provide public transport with less energy and less noise. Since the development of the sustainable mobility of Malmö Stad is based on focusing on the development of cycling routes and pedestrians. In order to achieve the goal, and then facilitate the possibility, the study realized that the idea of an electric bus suited with sustainable mobility in Lindängen.

6.6. The impact of Share Economy on Transportation

This section has been supported by the theoretical background of social justice related to transportation. I rely on Walzer (1983)’s ‘Spheres of Justice’ conceptualization to provide such a theoretical foundation for a distributive approach to transport. Walzer’s approach starts from the conceptualization of society as a distributive community, in which people produce a variety of goods that are subsequently shared, divided and exchanged in specific ways. Regarding to the sharing economy, Kenton (2019) says:

“The sharing economy is an economic model often defined as a peer-to-peer (P2P) based activity of acquiring, providing or sharing access to goods and services that are facilitated by a community based online platform.”

Demailly & Novel (2014) argue that sharing economy can be defined as a preference for paying for asset or service costs with consumption or demand, rather than ownership of assets permanently or long-term contracts for services. However, this technology offers new opportunities for participants to increase the idea of using a common platform to grow their business and increase their benefits. Using a shared platform, a car rental company or other major carriers service can effectively exceed its capacity at the customer base or with the wider market network. Therefore, customers would only lease the base. Capacity required to meet the basic need, while peak demand would be performed by a shared fleet. For customers, they can reduce the estimated costs and the total cost of shipping. For providers, the same amount of customer demand can be made with fewer assets, thereby increasing the effectiveness.

Botsman and Rogers (2011) also note that contemporary forms of participatory consumption often occur in the context of economic insecurity, where people have to find low-cost ways to find them. Another driving force is the widespread awareness of environmental challenges because sharing
material things can be a way to use fewer resources. Some of the common practices can be attributed to fatigue with consumer culture and a desire for other forms of social belonging and participation in society. In a way, the idea of sharing the economy contributes to develop of transportation in terms of infrastructure as well as the distribution of knowledge alliances to access resources equity in Lindängen.

Hagan (2018) believe that the idea of sharing economy where comes from that we are dealing with massive of the asset as like house and cars which we should use it. It is clear that women who involving in child caring would be comfortable to use a car. Due to the growing trust of digital technology for the transfer of goods and services – often through asset-sharing services – we get to face challenges. If this is the case, what impact will this have on transportation and mobility? And what barriers to innovation in the transportation sector need to be overcome? Technological innovations in personalized and on-demand services help us transform the future - and the sharing economy can respond. Whether it's developing a solution that allows people to instantly report claims by using a car or bike-sharing service; or create a way to encourage car-sharing operators to create more responsible driving.

Magda & Viktoria (2016) argue that there is a lot of common challenges start with the current regulatory framework that has not been created for an economy based on asset sharing. Another challenge of these behavioral changes is that many targeted users of this new service will see their potential, but they are afraid to try it because it is looking to do new things. Third is the media challenge. The newsletter and other types of media will pay special attention to these new services and that their potential, collaboration, and partnerships will be shaped. It is worth noting that the challenges associated with transportation can be complicated by a widespread transportation network, rapid development in terms of transportation, market demand, technological adaptation, appropriate knowledge alliances for multi-layered dimensions of society, policymakers, and government regulation.

### 6.7. Shared Mobility

In order to understand the impact of sharing economy on transportation, we explore the role of shared mobility on current transportation. According to Talwar (2017), shared mobility, the common use of a vehicle, bike or a low-speed mode is an innovative transport solution that enables users to access short-term modes of transport “as needed". It can also provide commercial transportation vehicles that offer flexible goods movements. Shared Mobility includes car sharing, bike sharing, personal car sharing (or peer to peer (P2P) car sharing), shuttle service, scooter ridesharing, and on-demand ride services. Shared mobility has had a transformative impact on many cities around the world, with increased access to transportation and, at the same time, a decrease in the ownership of personal vehicles.
According to Shaheen & Chan (2015), various studies have shown that reducing in-vehicle use, ownership, cost savings, and convenience are often cited as common reasons for switching to a sharing mode. The mobility modes have reported environmental, social and transportation benefits. It potentially plays a crucial role in removing gaps in existing transportation networks and encouraging multifunctionality. It is also thought to provide economic benefits in terms of cost savings, increased economic activity near public transit stations and multi-modal centers, and provide access to them by creating opportunities for new trips not previously accessible by traditional public transportation and by enabling new one-way (or point-to-point) service options previously unavailable. Overall, carsharing users also walk, bike, and carpool more often, which leads to reduced monthly household transportation costs.

6.8. Analytical Results

It is hereby important to note that there are racial, age, ability and class barriers to daily mobilities of women. This leads to an attention to feminist nature and diverse social positions of citizens. As a result of analytical part, three central themes were raised through a focus group, semi structure interview and analysis of statistics. The critical considerations of temporal, spatial, and lack of integrated policy and plan that emerged the second question of my thesis:

- How is the provision of the new paradigm of mobility in Lindängen pursuing transportation justice provides an extension of opportunities to women and promote social inclusion in Lindängen?

Looking back, Chakwizira (2009) argues that most urban transportation systems are not designed to meet the needs of women to link multiple travels, many during non-peak hours and out of the main transport routes. Thus, the last theme, lack of integrated policy and planning is discussed.

As the analysis results, the temporal considerations illustrated the significance of public transport service in frequency and time budgets that women mainly encounter in their daily lives. The spatial consideration looking at spatial reach and access to opportunities through the investigation of women mobility pattern. Regarding the visualization of the geographical map of Lindängen, its green spaces act as barriers that impact the accessibility of the participants. This leads to their concerns regarding poor transport when it comes to the fulfilment of daily activities and responsibilities within these spatial reaches. Thus, I framed the second discussion of the thesis which can provide a solution due to the circumstance of Lindängen and for the high capacity of the market for bike sharing.
7. Conclusion and Discussion

In this chapter, I will bring together the analytical results and findings of the thesis to respond to the research questions of the master thesis. The reflection on the center of critical consideration of the mobility behavior of women in Lindängen illustrated the main restrictions. Thus, the study presents a discussion of potential further research areas that would serve to retain the local knowledge and reliable information acquired in this study and contribute to the further research of sharing mobility in order to promote sustainable mobility. As Joanna Christensson states “More bus and capacity would not be the right solution but also it could be the connection, Malmö to Lindängen and Lindängen to Malmö. So, it decreases barriers, which breaks the pattern.” (Interview 1)

According to Christansson & Geppert (2017), Local knowledge shared by local actors also indicates that Lindängen residents are heavily involved in boring projects. The residents' trust in the municipality was disappointing because of previous "unprofitable" focused projects and collaborative initiatives. In addition, Lindängen has a young population, which led to the contemporary hype around innovations and the disruptiveness of the new mobility paradigm that can emerge new necessities. It can be demonstrated in the more tangible social gap in a segregated area. In the case of Lindängen, bike-sharing offers many benefits and potentially can be a great solution to a more sustainable transport system. Yet, its implementation into a real-life urban setting has caused disruption and created a different challenge for authorities. As such, implementing a new form of urban mobility needs an integrated and permanent plan in the field of socio-culture and socio-technical transition. It is worth noting that the SUNRISE project focuses on strategies that can lead to new types of sustainable mobility solutions. These solutions are aimed at enriching the transportation developed by people through social innovation and neighborhood governance. There is no expectation of any development in terms of transport infrastructure.

7.1. Conclusion

The outcome of the study is a significant move for the new mobilities paradigm equipping it with a new conceptual tool for assessing the fairness of mobility justice that led to creating an innovative idea of sharing economy particularly bike-sharing. Developing infrastructure for sharing is a way of combining social and environmental aims and coordinating long-term goals in resource efficiency and social justice by using practical solutions to Malmö facing immediate problems - social polarization and unemployment. Furthermore, it can be argued that the aim of mobility and transport justice, known as the socio-political movement, is to overcome the inappropriate distribution of access to citizens in a community.

Four new CIVITAS projects (including SUNRISE) focus on urban districts. By assuming neighborhood-specific features such as proximity, trust, and identity, some strategies can be
created leading to new types of mobility solutions. These solutions aim to enrich transportation developed by people through social innovation and neighborhood governance. However, the implementation of these ideas seems challenging given the weakness of this particular urban zone in terms of education and employment.

7.2. Reflections

The reflection upon the mobility situation in the area expressed underlying mobility needs and encouraging idea generation on prospective solutions. However, CIVITAS projects (including SUNRISE) focus on urban areas based on social neighborhood-specific features that can strategically bring out new types of mobility solutions through social innovations. Lindängen definitely needs other key factors such as collaboration with the business community and the authorities through inclusive planning and sharing mobility initiatives that have a low ecological footprint, sharing economy benefits and potential for sustainable mobility issues. According to Mikulic (2018), the political opponent municipal council Andreas Schönström agrees that the situation has gotten worse from the safety perspective, that the insecurity is increasing but at the same time apparently it is starting to turn in the right direction. This is a collaboration with the business community and the authorities. In this sense, collaboration is the key to lifting Lindängen from a lower position.

So, the study highlighted the sharing mobility and explored more details about the feasibility of the area in terms of infrastructure for bike-sharing due to the analysis of the result of SUNRISE project. Shaheen & Chan (2015) argue that the bike-sharing phenomenon in large cities leads to less access to bus while bus ridership increased in smaller cities and led to ridership, which contributed to the fact that the bike-sharing improves access to a bus line. Rail usage in large cities has been decreased due to faster travel speed and more cost-saving. As a result, bike-sharing leads to a reduction of personal car usage and the cost of transportation.

7.3. Discussion

In order to identify and test integrated solutions that encourage people to travel in a sustainable way, it’s needed to reach out to many residents and to understand of their concrete needs in their daily mobility (Schor, 2014). With regards to activating public transportation, it is needed to have co-planned and co-developed measures for one reclaimed-urban-space-lab area to be implemented (Christensson & Geppert, 2017). Further research could be the investigation of the potential role for local public planning regarding collaborative consumption through creating sharing infrastructure, i.e. providing access to shared tools and spaces for making and enabling citizens to act in the city. In terms of the circumstance of Lindängen, the study could contribute to investigating how the local authority in Lindängen can enable infrastructure for sharing that also functions as public space.
As part of the growth of sharing economy, public authorities are improving their policies and legislation in order to highlight the problematic issue of sharing economy and facilitating the sharing mobility that has seen beneficial for society (Coldwell, 2014). In terms of the role of the city in relation to sharing economy, it is important to identify what kind of sharing practices are in question and what the purpose for this is. Regarding the enabling side, local authorities would be improving infrastructure and policies to facilitate vehicle sharing, supporting community maker spaces and providing land-sharing platforms (Agyeman et al., 2013; Finck & Ranchordás).

In the shared bike system, there is a tendency to be available where you need a bike when you need them. With regards to the efficacy of planning in using the bike-sharing system, a study about bike-sharing in Norway explained their usage rate is predicted to increase impressively. Hans Martin Espegren (2016) from the Data Science Team at Urban Sharing in the study explains why bike-sharing in Norway outperforms those in the Scandinavian neighbors. First, Norway has had a strong public transport system for many years. The bike-sharing tends to be seen as a natural part of how people in the city move. The second is technology. Norwegians have grown up surrounded by digital solutions, so they are accustomed to trusting technology. There is also a network connection in most of Norway, so that, of course, reinforces digital cycle sharing schemes.

According to the research, people were allowed to rent bikes for three hours. In the case of Lindängen, it would be a good idea that the green space as a barrier could impact on the accessibility of people to the public transportation. So, the prolonged usage for long distances will work. According to the study, people would probably only use their bikes for a fraction of that time. For a long time, there was no bike available, often without a compelling reason. So, in the case of Lindängen, there is a possibility to cut the maximum usage time down to 90 or 120 minutes. The reduction of the rental time can rely heavily on the estimated demand for bikes that leads to a long period of time when a bike would be available. Furthermore, the study predicates that not every location in Lindängen had the same amount of demand for bikes, nor the demand is consistent throughout the day.

According to Espegren (2016), regarding bike-sharing patterns, standard equilibrium algorithms do not intuitively capture the distribution of gender or wealth. If a city wants to ensure that every population is treated equally, they must study and accommodate demographic usage patterns isolated from average usage patterns. It is worth noting that mismatch with existing regulation can act as a mechanism that hinders innovation. The implementation of the bike-sharing system has, however, conflicted with the public authorities’ need to ensure public space is safe and accessible for all users. Regarding Johanna Christenson’s statement, many bikes stolen have been reported by residents. Bikes have been viewed as adding street clutter to limited shared spaces and have thus been a source of friction, both between city users and between public and private sector actors.

I really suggest further research about what the grassroots groups have a crucial role in providing a substitute, which can be parallel for the infrastructure provision. Hult & Bradley (2017) believe
that local authorities can and should play a key role in restructuring infrastructure and supply routes, providing facilities for citizens to organize, build, repair and share resources in a social way. The development of infrastructure for sharing and repair, perhaps, is particularly marked in contemporary contexts with economic constraints, both for citizens who need to get by on less and for municipalities when funding is not enough for large infrastructure projects. As Johanna Christensson points out that the main challenge which impacts on the decision making in the project is the economic constraints. In reply to the question “What is your opinion could be done to improve sustainable mobility?” Johanna Christensson stated:

Big question. It is needed to be supposed a physical change and also a lot of testing and assessment and information in order to understand how a thing works. We understand that people do not know how they can cycle. Some people do not see cycling as an alternative. A lot of work is needed to be done for the perceptions of safety. We want to collaborate a positive change, but we understood that we cannot do it without facilitating the feasibilities for infrastructure. We understood that a lot of actors, residents, and projects work in Lindängen. The residents are quite frustrated because there were a lot of projects but not too much happened. This is because it is a big area and big housing projects are ongoing in the area. We want to show that something tangible can happen. (Interview 1)
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Appendix

A.1 Interview with Joanna Christensson, from Malmö Stad (2019/06/18)

A member of EU-project called SUNRISE focusing on co-creation and sustainable mobility in Lindängen.

1. Could you introduce yourself and tell us a little about your project?
2. What is your opinion of the provision for sustainable mobility in Lindängen?
3. What, in your opinion, are the main problems with the provision of sustainable mobility?
4. What in your opinion could be done to improve sustainable mobility?
5. Your main focus is on the development of cycling and pedestrian routes, how could it be facilitated by the infrastructure? or could be included for car routes?
6. How to facilitate sustainable travel in a neighborhood where people's choices for mobility are determined by high levels of insecurity?
7. According to the massive construction in Lindängen, the question is how much the current infrastructure can respond to transportation demand?
8. Who are stakeholders in the project?
9. How could you measure the outcomes of the project and how the residents participate in making a decision?
10. What do you think about electricity bus?

A.2 Focus group Interview 18/05/2019

1. Could you introduce yourself? Where are you come from?
2. What do you think about public transportation in Malmo (Lindängen)?
3. If you use a bus/bus is not available. What type of transportation do you use?
4. What do you think about safety in public transportation?
5. If you use the Smart Trip Card, where do you go to load money to the card?
6. If you do not load fare online, please explain why?
7. What do you think about electricity car?

A.3 Semi structure interview 23/05/2019

1. Could you introduce yourself? Where are you come from?
2. Describe the mode of transportation that you used to go to home or work?
3. Did you get in trouble by using a car, for example, parking spot?
4. Do you know how important is transportation for your social life?
5. How do you get information, for example, about traffic jam?
6. What do you think about electricity car? How can you use the app?
7. What, in your opinion, are the main problems with the using electric car?
8. What comments or question do you have for me? How transportation could develop?