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CYCLING FOR EVERYDAY TRANSPORTATION AMONG WOMEN IN THE CITY OF BUENOS AIRES - BARRIERS AND POTENTIALS -

Master's Thesis - Dual Master Urban Planning and Mobility

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Zusammenfassung

Mobilitätsdaten aus verschiedenen Städten zeigen, dass Frauen* tendenziell seltener Fahrrad fahren als Männer. Die vorliegende Arbeit untersucht die Gründe für dieses geschlechtsspezifischen Unterschiede beim Radfahren anhand von Buenos Aires. Auf Basis einer Literaturrecherche wurden Faktoren ermittelt, von denen angenommen werden kann, dass sie Frauen* in ihrer Entscheidung Radzufahren beeinflussen. Darüber hinaus wurden zwölf offene, qualitative Interviews mit einer heterogenen Stichprobe von Frauen* durchgeführt, die einen Einblick in ihr Mobilitäts- und Radfahrverhalten und die Gründe dafür geben sollten. Den Ergebnissen der Interviews zufolge waren die Faktoren, die sich am stärksten auf Frauen* in Buenos Aires auswirken, Sorgen um die Verkehrssicherheit und die persönliche Sicherheit, das Fehlen bestimmter Fähigkeiten oder Fertigkeiten, ein Mangel an Erschwinglichkeit, Schwierigkeiten im Zusammenhang mit der Sorgearbeit sowie soziokulturelle Barrieren in Bezug auf die Mobilitätskultur oder Geschlechternormen.

Im Kontext einer nachhaltigen Stadtentwicklung, aber auch in Anbetracht der aktuellen Pandemie, gewinnt das Fahrrad als Verkehrsmittel an Bedeutung, und es wäre wünschenswert, dass mehr Frauen* in Buenos Aires bequem und ungehindert das Fahrrad für ihre tägliche Mobilität nutzen könnten. Die Arbeit schließt daher mit einem Katalog von Handlungsempfehlungen ab, die dazu beitragen können, das Radfahren attraktiver zu machen.

Resumen

Los datos de movilidad de diferentes ciudades indican que las mujeres tienden a usar la bicicleta con menor frecuencia que los hombres. Esta tesis investiga las razones de esta brecha de género en el ciclismo urbano para el caso de la ciudad de Buenos Aires. Mediante un análisis bibliográfico se identificó una lista de factores que supuestamente influyen en la decisión de las mujeres de usar o no bicicleta. Además, se realizaron doce entrevistas cualitativas semiestructuradas a una muestra heterogénea de mujeres, con el objetivo de conocer su comportamiento en materia de movilidad y uso de la bicicleta, tal como las razones que lo motivan. Según los resultados de las entrevistas, los factores que parecen tener más impacto en las mujeres de Buenos Aires son preocupaciones por la seguridad vial y por la seguridad personal, la falta de ciertas habilidades, la falta de asequibilidad, las dificultades relacionadas al trabajo de cuidado, así como barreras socio-culturales asociadas con la cultura de la movilidad o las normas de género.

En el contexto de un desarrollo urbano sostenible, pero también teniendo en cuenta la actual pandemia, la bicicleta está ganando importancia como modo de transporte. Sería deseable que más mujeres en Buenos Aires se sientan cómodas y sin impedimentos para utilizar una bicicleta para su transporte cotidiano. Por lo tanto, la tesis concluye con un catálogo de recomendaciones.

Abstract

Mobility data from different cities indicate that women tend to cycle less frequently than men. This thesis investigates the reasons for this gender gap in urban cycling in the case of the city of Buenos Aires. By means of a literature analysis a list of factors was identified that can be assumed to impact on women's decision to cycle. Furthermore, twelve semi-structured, qualitative interviews with a heterogenous sample of women were conducted, that aimed at getting an insight into their mobility and cycling behavior and the reasons for it. According to the results of the interviews, the factors that seemed to have most impact on women in Buenos Aires were worries about the traffic safety and about the personal security, the lack of certain abilities or skills, a lack of affordability, difficulties related to care-work, as well as socio-cultural barriers regarding the mobility culture or gender norms.

In the context of a sustainable urban development, but also considering the current pandemic, the bicycle is gaining importance as a mode of transport, and it would be desirable that more women in Buenos Aires were comfortable and unimpeded to use a bicycle for their everyday transportation. Therefore, the thesis concludes with a catalogue of recommendations for action to tackle the issue.

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Abbreviations and local expressions

AMBA – Metropolitan Area of Buenos Aires (formed by CABA and adjacent municipalities)

ARS – Argentinian Pesos (currency)

BRT – Bus Rapid Transit (called Metrobus in Buenos Aires)

CABA – City of Buenos Aires

Ecobici – Public bicycle sharing system of Buenos Aires

Microcentro – Downtown Buenos Aires

Pedalea como una Piba – trans-feminist cycling activist group in Buenos Aires

1. INTRODUCTION

“Let me tell you what I think of bicycling. I think it has done more to emancipate women than anything else in the world. It gives women a feeling of freedom and self-reliance. I stand and rejoice every time I see a woman ride by on a wheel... the picture of free, untrammelled womanhood.”
(Susan B. Anthony, US-American women’s rights activist, 1896)

1.1 Problem Definition and Relevance

Women tend to cycle less than men to realize their everyday trips. According to data from 2010, in Buenos Aires women’s participation in cycling used to be significantly lower than men’s: more than 80% of all bicycle trips were made by men (BID 2017: 29). More recent data suggests an increase, but the gender gap in urban cycling in Buenos Aires persists. In other Latin-American cities the numbers are similar - independently of the general importance of cycling in the mode share. In Bogotá women account for only 22% of all bicycle trips (Noguera 2019). Although it was not possible to find directly comparable data, the numbers of Mexico City and Santiago de Chile indicate a similar gender gap. In Mexico City cycling constitutes a 0,69% of women’s mode share while in the men’s one it makes up a 2,86% at least (Méndez 2019) and in Santiago de Chile cycling takes a 3% (women) respectively a 10% (men) in the city’s mode share (Allen 2018: 13). For comparison, in many US and Australian cities women’s participation in cycling trips is of around 30%, in Berlin of approximately 40%, in Tokyo of about 50% and in the most cited cities regarding cycling in Europe – Amsterdam and Copenhagen – even of about 60% (Garrard et al. 2012: 216). Thus, this gender gap in urban cycling seems to be a common phenomenon (although in varying degrees) in many cities all over the world, but it does not constitute a definite and unalterable status quo. Also, the explanation for the low participation of women in cycling cannot just be as simple as women generally not being interested in cycling for their transportation. There must be other reasons and factors that keep women from cycling and make them prefer other modes of transport instead – which is a pity considering all its benefits for the health and wellbeing, the city and urban traffic, and the environment. Proceeding from this line of thought, the main aim of this thesis is to investigate what these reasons and factors are in the case of women in Buenos Aires. The probable motives that prevent women from cycling can be manifold. A greater knowledge and understanding of these factors and barriers, but also of current women cyclists’ experiences, can contribute to designing diverse strategies and sustainable mobility policies that include the specific needs of women.

However, in Buenos Aires the general importance of urban cycling has already increased over the past years and is still increasing, not only as it is promoted as a sustainable transport mode, but also because of the Covid-19 pandemic that accelerated the demand for cycling infrastructure and generated new users (La Nacion 2020; Reunion 2020) – among which probably are women as well. Hence, in order to make this trend to more cycling an inclusive one, the local government has to integrate a gender perspective in their urban and traffic planning to meet the specific perceptions, expectations and necessities women might have – since in the context of the current pandemic as well as of the promotion of a sustainable development in general, it is desirable that more women in Buenos Aires were comfortable and unimpeded to use a bicycle. The low percentage of cycling women in Buenos Aires indicates either that there are gender specific necessities that currently are not sufficiently considered in the urban and traffic planning, or that there are more general, socio-cultural factors that impact the attractiveness of cycling for women. In both cases, that implies that

women's mobility is limited compared to men's, because the bicycle as another potential mode of transport does not seem to be an option for most of them. In a broader vision, that makes the topic also essential regarding issues of gender equality and for providing equal opportunities for women in the society. The bicycle – for being an individual, flexible and rather affordable mode of transport – can be a valuable tool to facilitate women's everyday mobility, and thus the accessibility to elemental places and services as well as women's participation in the social and professional life.

1.2 Research Questions and Objectives

Picking up the idea of the collective *Col·lectiu Punt 6* that it is crucial “to think in the persons one does not see in the city”, Mancilla (2018: 53) asks “which are the reasons and perceptions for which [people in Buenos Aires] are not using a bicycle yet”? The present thesis adopts this question and attempts to find an answer to it – at least for the case of women: Which are the reasons for women in CABA (City of Buenos Aires) to cycle less frequently than men and how is it possible to increase the percentage of women in utility cycling in CABA? Furthermore, how do women cyclists perceive the conditions of cycling in CABA? Which are the attractive and discouraging factors of cycling in CABA? How can the attractive factors be promoted while the discouraging ones be minimized?

Consequently, the thesis' overall objective is to investigate in an exploratory and qualitative manner the reasons why women in the city of Buenos Aires use or do not use the bicycle for their transportation, by identifying the factors of influence (barriers and facilitators) for cycling, in order to eventually contribute to local mobility policies with a gender perspective. It is assumed, that by reconstructing how cycling is perceived by women in Buenos Aires, it is possible to derive strategies and measures to make cycling a more attractive mobility option for them. More specifically, this implies: First, to elaborate a theory-based foundation for the investigation about the interrelations of gender and urban- or traffic planning, mode choice decisions, and particularly about gender in the context of cycling. Second, to identify the possible factors that impact on women's decision to cycle, whether facilitators or barriers, considering different dimensions such as spatial (urban form, infrastructure), mobility-related (other transport modes, traffic, traffic safety) and socio-cultural aspects (perceptions, experiences). Third, to analyze the local context of CABA regarding the local cycling conditions, the gender gap in urban cycling, general mobility patterns, as well as regarding local cycling and mobility policies, in order to contextualize the findings. Fourth, to capture the perspectives and experiences of women who are bicycle users or potential users. And fifth, to elaborate first recommendations for the promotion of cycling among women in CABA.

1.3 State of the Art

Regarding the gender differences in mobility choices and patterns, a string of different publications is available that explore the mobility of women and identify their specific necessities as well as the barriers they face (i.a. Cresswell/Uteng 2008; Scholten/Joelsson 2019; Turner/Fouracre 1995; Allen 2018; Reynolds/Letherby 2009; IDB 2016; ITDP/WEDO n.d.). Furthermore, there are various studies that analyze the specific impact of gender on bicycle usage, most of them following a quantitative approach and published in the context of the anglophone world (US, UK, Australia). As those are all regions with a small percentage of cycling in the modal split and little women's participation in cycling the results seem to be at least generally transferable to Latin America or Buenos Aires in particular. Anyhow, local peculiarities and cultural differences can be anticipated. The mostly quantitative studies (i.a. Garrard et al. 2008; Beecham/Wood 2013; Heesch et al. 2012;

Emond et al. 2009; Grudgings et al. 2018; Singleton/Goddard 2016) identify the specificities of women's cycling behavior and indicate some general reasons why women tend to cycle less than men - among those worries about traffic safety, differences in the perception of cycling infrastructure, security issues, or the unequal distribution of care and household related work. Although these studies show gender-specific inequalities and proof that women use the bicycle in another way than men, most of them do not represent the concrete perspective of women, nor achieve to depict the whole complexity of causes, motivations, and reasons for women to cycle or not. The qualitative studies that exist go more into depth exploring the reasons for the gendered differences and experiences, but usually pick up only one specific aspect, as for example the usage of cargo-bikes (Riggs/Schwartz 2018), cycling during pregnancy (Bennet 2017), or the role of cycling education (Rowe 2013).

For the Latin-American context, and thus closer to the specific case of Buenos Aires, two publications from Brazil and Mexico need to be highlighted: First, the study of Lindenberg Lemos et al. (2017) that analyzes the differences between men's and women's travel patterns and bicycle usage in Sao Paulo based on origin-destination data and a pre-existing cyclists' survey. The authors could confirm differences in the bicycle usage of men and women and could conclude that the cycling infrastructure is only one of many things that impact on women's decision to cycle. By formulating hypotheses about the other probable factors of impact they set a base for further research. Second, the study of Vázquez (2017) who explored female cyclists' experiences in Mexico City and came to a similar result, concluding that there are factors going beyond the mere infrastructure that need to be considered to make cycling policies more gender inclusive – among those socio-cultural barriers, organizational difficulties in the everyday life of women, or the lack of necessary abilities. The outstanding characteristic of Vázquez' study is its qualitative approach (with interviews and participatory observation) that achieves to outline a complex image of possible factors that impact on women's decision to cycle, and thus is a relatively helpful work to orientate at.

In the local context of Buenos Aires, the study *Ella se mueve segura* ("She moves securely", CAF/FIA Foundation 2018) needs to be mentioned that analyzes the differences in the perception of security in public transport, as well as in the mobility behavior in the framework of gender inequality. Also, it presents best practice cases and possible measures to implement to make the city and mobility more gender inclusive. As it looks at mobility in general and mainly at the public transport, cycling is only a very minor topic. Anyway, it provides helpful insights into the mobility behavior of women and security issues they face when traveling in the city. Another important contribution comes from the *Gender and Mobility Plan* of the city of Buenos Aires (Buenos Aires Ciudad 2019b) that includes a part which analyzes local mobility data according to the gender, and thus provides a basis regarding the mobility patterns of women in Buenos Aires. Also, the study *Women and Urban Cycling* (BID 2017) is to be mentioned that already provides a general investigation about the topic that (based on a participative workshop) identified strengths and weaknesses in public space and in the cycling infrastructure in CABA for women cyclists. Furthermore, an ethnographic publication about cycling in Buenos Aires gives first insights into the everyday experience of cycling in the city (Mancilla 2018). In his reflections he also recognizes that women's experiences on the bicycle differ from those of men, mentioning the restrictions women perceive in public space in general, the sexual harassment they suffer from, but also the low confidence of women regarding their skills and the violence in traffic. The existing studies and plans in the local context provide important information and helpful starting points to approach the topic and find answers to the research

questions. However, none of them achieves to explore and explain the gender gap in cycling in Buenos Aires in its full complexity.

1.4 Structure and Scope

The thesis is structured into seven chapters. After this introductory chapter, chapter 2 forms the theoretical framework for the investigation and picks up the two main themes, gender and cycling-mobility, and gives an overview about how those topics interact. Above that, this chapter provides the basis for the further proceeding as it deductively specifies the possible dimensions and factors that impact on women's decision to cycle. Chapter 3 summarizes some relevant information concerning gender and cycling-mobility in the context of Argentina and Buenos Aires that helps to interpret the findings from the empirical part of the work. The methodological framework is presented in chapter 4 which describes how the topic was approached and which methods were applied during the investigation, forming an introduction for the following parts. The centerpiece of the work is presented in chapter 5 where the results of the empirical investigation are analyzed, interpreted, and discussed. While this chapter closes with a conclusion that rather traces back to the theoretical framework and responds to the first part of the research question, chapter 6 aims at drawing more practical conclusions as it formulates recommendations for action for the specific case of Buenos Aires in order to answer the second part of the research question. Finally, chapter 7 summarizes the principal results and evaluates their significance for the case study and further investigation.

As this work was elaborated to be presented as part of a master's study program, it does not achieve the scope of an exhaustive and fully comprehensive research project. The approach had to be narrowed to a feasible research design that aims at proofing existing theories by applying them to the case study, while at the same time exploring the local particularities. Also, the work solely provides first qualitative insights that cannot give reliable assessments about the degrees of significance of the results. Also, as the scope of the work did not allow a comparative study and focuses on women only, it does not provide cleansed data in the sense of gender-specific data, but also includes rather gender-neutral perspectives that men probably would have viewed in a similar way. Therefore, chapter 5.3 undertakes an evaluation of the gender-specificity of the obtained results. Regarding a spatial limitation, the city of Buenos Aires was chosen to be the place of the investigation since a broader view on the whole metropolitan area would have implied a larger variety of specific circumstances, conditions, and policies. Furthermore, although the work is targeted at a rather mobility-focused understanding of cycling, it was not always possible to draw a clear line between utility and recreational cycling as the transitions are often smooth and as in practice a hard differentiation is not always necessary or useful.

2. THEORETICAL FRAMEWORK

This chapter presents the theoretical framework of the thesis and focuses on the two main themes the work combines: gender and cycling mobility. The following pages gather concepts, theories and information that are necessary and helpful to approach the topic and to comprehend the underlying assumptions and issues. Finally, in sub-chapter 2.3, the principal insights are condensed to form the basis for the following parts of the work.

2.1 Gender

The term gender describes a social and cultural construct referring to a person's identity and social status that needs to be differentiated from the biological sex (male/female) (Lorber 2010: 15). Gender is constituted by social processes that create the gender categories woman/girl and man/boy, that in turn are connected to certain images and expectations (ibid.). This division, and hence the norms and role conceptions, imply inequalities that can be found incorporated into all parts of social life – economy, family, state, culture, religion, law etc. (ibid.). Although there is a great variety of different gender identities, for the thesis the simplified categorization between women and men is being adapted. Not only for this simplification, the category of “women” is very abstract and generalized, but also as there is an enormous diversity within this category, considering the age, different ethnic groups, income differences, disabilities, the sexual orientation, body forms etc., that intersect with the condition of being a woman. The concept of intersectionality describes the interwoven and overlapping power structures and forms of discrimination that persist within each of these categories and that, when coming together, form specific identities and multiple, interdependent inequalities (Viveros Vigoya 2016: 2; 5). Although this work does not accomplish a complete intersectional approach, it intends to represent a part of this diversity and to take into account the existence of other intersecting factors.

2.1.1 Gender Inequality

As mentioned in the brief introduction before, the social division of gender, as well as the norms and role expectations create inequalities between women and men that affect the realities of life and opportunities of both of them. Ridgeway (2011: 56ff.) focuses her argumentation on these socio-cultural expectations and norms: Behaviors and characteristics that are seen as typical for women or men become stereotypes. These stereotypes do not merely *describe* certain traits often associated to either men or women, but do have a *prescriptive* effect as well, as they function as instructions or rules on how to act (ibid.: 56-58). She argues that these prescriptive gender norms form part of the consensual knowledge of a society (ibid.: 62) and facilitate and ease the social coexistence of people by providing a framework for behavior (ibid.: 59). Anyway, these gender norms are “structural constraints to gender equality” (UN Women 2019: 30), as they imply expectations about what one can or cannot do, and as breaching the rules might be socially disapproved or sanctioned (ibid.; Ridgeway 2011: 59). Furthermore, gender norms must be scrutinized because gender conceptions and expectations do not only hint at neutral differences between women and men, but rather imply certain hierarchies, as the roles and behaviors associated to men are mostly higher in status and power than the ones associated to women (Ridgeway 2011: 62ff., 65). According to Ridgeway, the typical behaviors shown by men and women (that form the basis of the gender stereotypes) are culturally determined by the gendered division of labor and the

status hierarchies related to it – at least in the cultures of western influence, women are more strongly involved in domestic caretaking, while men are more likely to be exclusively engaged in paid employment, and often in jobs of higher reputation than women (ibid.: 63ff.). However, the stereotypes further consolidate, become hegemonic, and even become institutionalized (in laws, education, media etc.) as most positions with decision-making power are taken by a certain type of men, who act and make decisions according to their own gendered experiences (ibid.: 67f.). Since it is men who take roles associated to higher status and power, they can be seen as the dominant group in society - which brings up the term of patriarchy that refers precisely to the historically grown and culturally implemented, structural dominance of men over women in a society (UN Women 2019: 23).

The consequence of these socio-cultural processes are gender inequalities that manifest in all parts of life. Anyway, Lorber points out that it is usually men who benefit from these gender arrangements (2010: 4ff.), what makes gender inequality mainly an issue for women. Although men might be disadvantaged in some aspects as well – for instance as they are more likely engaged in dangerous or even life-threatening tasks and responsibilities like doing military service, firefighting or policing (ibid.: 5) – women tend to experience more drawbacks from these structures. Lorber (ibid.: 4ff.) lists various negative impacts, among them the higher workload for women in household and caretaking, the lower financial and reputational reward for women’s work, or sexual exploitation as well as violence (sometimes as a consequence for breaching gender norms, UN Women 2019: 30). In a global vision, women also tend to have less access to education, healthcare and political participation, are more likely to live in extreme poverty, or are even restricted by law to decide freely about their lives (UN n.d.).

Nevertheless, neither patriarchy nor gender stereotypes and norms are unalterable conditions of a society (Ridgeway 2011: 64; UN Women 2019: 24). By changing cultural and social practices, a transition to more gender equality is possible. This implies questioning current arrangements and structures in every part of society and public life – and hence also in the city, the transport infrastructure, in mobility patterns and in the disciplines of urban and traffic planning in general.

2.1.2 Gender in Urban and Traffic Planning

This section continues the argumentation about gender differences and norms of the previous sub-chapter and applies it to the field of urban and traffic planning, as they are no gender-neutral disciplines. Given that they are both multi-faceted disciplines with a concrete and direct impact on people’s life, applying a gender perspective is indispensable, but in turn also increases their complexity (Cresswell/Uteng 2008: 1). As Massey states, “spaces and places, and our senses of them [...] are gendered through and through” (1994: 186). What she points out with this statement is that gender has an important impact on how we use and perceive the city, and on the other hand, that the different spaces also participate in constructing and understanding gender roles (ibid.). Kern describes the same phenomenon: “built environments reflect the societies that construct them” (2019: 20) and “once built, our cities continue to shape and influence social relations, power, inequality, and so on” (ibid.: 21). In the same way, this principle of reciprocity also applies to the specific topic of urban mobility: gender influences the way people travel and, at the same time, these differences in the behavior and mobility reproduce hierarchies of gendered power (Cresswell/Uteng 2008: 2). Hence, the application of a gender perspective in urban and traffic planning is considered necessary for the inclusion of diversity (Joelsson 2019: 4) and as an adequate step to achieving the right to the city for everyone (Fenster 2011; Levy 2019).

Wekerle (1985: 11f.) illustrates the interrelations between city, gender and mobility by means of an example from suburban life - thus, the life in a city or district with segregated land uses, purely residential neighborhoods, car dependent transport infrastructure and long distances to travel to realize all day-to-day activities. A woman living in this neighborhood who is responsible for taking care of the household and family but also has a remunerated job outside of home, is discriminated in different ways: not only by the double charge of work, but also because of long distances between the places (home, work, stores, school or kindergarten, doctors etc.) and the lack of good public transport services that complicate her everyday activities. For these spatial and transport-related conditions, this woman is more limited in her personal and work-related opportunities than a man for whom it is more likely to travel by car and to only travel between home and work (ibid.). What the example shows in addition is that the socially and culturally constructed differences of gender and, linked to that, the gender roles and expectations, generate dissimilarities in the behavior and in the necessities of men and women regarding their mobility (Cresswell/Uteng 2008: 2). In this context, Paola Jirón (2017: 408 ff.) adds the concept of interdependence of mobility that implies that the mobility of one person always depends on the mobility of other household members or members of their social network. "Mobility decisions almost never are individual, but they are determined by a series of previous decisions and negotiations that happen long before leaving home" (ibid.: 409) - as for example the distribution of responsibilities or family's resources among household members (ibid.: 409f.).

Despite this, historically and until today, transport is a mainly male-dominated field - and as travelers and users, women often are not visible (Walsh 2009: 5; Reynolds/Letherby 2009: 24). Because of the male dominance in planning, decision-making and science, "the man" as a category becomes the standard and the norm (similar to other attributes like being adult, white, heterosexual, abled, cisgender) which leads to not considering sufficiently women's necessities (Kern 2019: 12; Reynolds/Letherby 2009: 24). Wekerle resumes the problem stating that "cities are still planned by men for men" (1985: 11). Because of that, women's experiences in the city differ clearly from those of men: Kern observes that women's everyday life in cities is profoundly characterized by physical, social, economic and symbolic barriers that are highly gendered (2019: 12). From this problem, Joelsson and Scholten conclude that it is necessary to consider a gender perspective and gender-related power structures in planning in order to improve the integration of diversity (2019: 4).

Continuing this line of argument, the idea of the *right to the city* becomes striking. Since mobility is a basic tool for accessing other services and functions of the city, the limitations and barriers in the mobility of a person also affect their opportunities as a citizen and resident of the city. Hence, the current discourse about the right to the city - which is based on the original concept of Lefebvre (*The Right to the City*, 1969) - also applies to the issue of gender and mobility and implies the question to what extent mobility affects women's right to the city. The right to the city can be understood as the "right to non-exclusion" from the qualities and attainments of the urban (Holm 2011: 89). Accordingly, it is "the right to use what the city offers and to participate in the creation or re-creation of those elements that it is lacking" (Buckingham 2011: 59) or, to use Lefebvre's words, the right to appropriation (in the sense of use) and participation (Levy 2019: 51). In this context, mobility plays a decisive role in these two aspects of the right to the city - not only because it gives access to urban spaces and enable people to participate, but also because the mere act of traveling already is a form of appropriating the city (ibid.: 52). Hence, in order to achieve this "non-exclusion" of women from the city and the urban, it is crucial to include a gender perspective into city and traffic planning. Therefore, a social change is necessary that rejects the existing structural inequalities and creates a vision of a just city with equal opportunities (ibid.: 51). This seems even

more important when contemplating Fenster's assessment that currently the predominant power relations often get ignored and that “the violation of the right to the city has turned into an everyday experience for many women” (2011: 66).

2.1.3 Gender and Mobility

This section takes a brief look at how gender differences manifest in the mobility behavior of women. The literature provides a general consensus that women show patterns and behaviors in their mobility that differ from those of men. Within these differences, it stands out that, on average, women tend to make more trips than men, tend to make shorter trips, more off-peak trips, trips with more disperse destinations, more household- and care-related trips (many times including the necessity to transport goods or to accompany children, elderly or people with reduced mobility), that they tend to trip-chain (combine various destinations in one trip), and that they are more likely to use public transport or walk than to use private transport modes (Allen 2018; Kunieda/Gauthier 2007; ITDP/WEDO n.d.; Vasconcellos 2010; Gauvin et al. 2020). These specific behaviors and patterns can be explained mainly by the unequal division of labor that implies a more complex travel behavior with other trip purposes and necessities for women. Figure 1 schematically illustrates typical mobility patterns of men and women, showing the rather linear trips of an average man compared to the manifold destinations and the trip-chaining of an average woman.



Figure 1: Gender Differences in Mobility Patterns (Secretaría de Movilidad CDMX 2019: 8)

Furthermore, some authors stress the intersections of gender with other criteria like the age, ethnicity or income that influence the mobility and that create differences within the group of women (Vasconcellos 2010; Gauvin et al. 2020, Allen 2018). Special attention is given to the intersection with social class, respectively poverty since women are more likely to be affected by poverty than men (or more strongly affected) which impacts their mobility options, as they might not be able to afford certain modes of transport and as male family members tend to have priority in using the vehicles a household might own (ibid.). Another relevant aspect regarding women’s

mobility is traffic safety and personal security that are highly influential in the mode choice, the choice of the travel route or the time of the day they choose to travel (Allen 2018; Vasconcellos 2010). In this context, psychological studies indicate that women, in accordance to traditional gender roles, tend to avoid risky situations or possible physical harm more than men (Eagly/Steffen 1986: 310).

2.2 Mode Choice: Cycling

As this thesis aims at explaining the reasons and motives for women's decision to cycle or not, first it is important to gain a general understanding of how mobility-related decisions are taken – how persons decide on their trips and modes of transport, and which factors and dimensions impact on their behavior.

2.2.1 Theoretical Concepts on Mobility Behavior

The term mobility is defined as the general possibility of moving and thus does not only relate to the *realized* mobility, so the trips someone makes, but also includes the *conceived* mobility, so all the trips perceived as possible (Gutierrez 2009: 8f.). Different factors influence if and how mobility can pass from being only conceived to realized – among those wishes, necessities and capacities that vary between different social groups or, considering the localization and time, also within the same social group (ibid.). The term mobility behavior refers to the realized mobility and thus describes the choices a person makes on whether to travel or not, when and on which route to travel, and which mode of transport to use. This thesis focuses on the latter aspect, the mode choice, and aims at understanding the mentioned factors that impact on the bicycle passing to be part of the realized mobility, or at least forming part of the conceived mobility of a person.

Mobility behavior can be investigated on different levels. So, knowledge from psychoanalysis about emotions and affections can contribute on an individual, micro-level to mobility research (Götz 2007: 765). On a macro-level, social theory helps to explain behaviors considering long-term technological and social developments and structures in the society (ibid: 766ff.). Finally, the meso-level takes a perspective on the social-interactive or cultural setting and thus closes the gap between micro and macro level (ibid. 770ff.; Dangschat 2017: 36ff.) to combine them into a more complex vision. On this meso-level, Götz proposes to apply lifestyle studies to cluster people into homogeneous groups according to their mobility behaviors (ibid.). In a similar way, the categorization into social milieus, for example according to the Sinus-approach, can be used to explain certain mobility patterns (Dangschat 2017: 37ff.). The term milieu refers to Bourdieu and is based on his habitus concept that is generally used to describe the disparities between different social groups (ibid.). With reference to Bourdieu, Steinbach et al. argue that the mode choice does not only depend on economic limitations and the conditions of the built environment but also on cultural factors and on the way in which the associated meanings of the mode are congruent with the individual objectives of the users (2011: 2). Or to put it in Bourdieu's words: the modal choice forms part of the habitus (ibid.: 7), so socialized individuals take decisions and act in the context of the society or rather according to their socialization (Engler 2010: 259). Hence, depending on the specific context they live in, persons have different associations with cycling - healthy, sustainable, transport for the poor, inappropriate mode for women etc. (Steinbach et al. 2011: 4) - that influence their decisions regarding which mode to choose or not. Horton et al. describe a similar phenomenon writing about the "status" of cycling that is influenced by the place, the time,

and the attitudes of cyclists as well as of observers (2007: 7). They emphasize the importance of considering this “status” when trying to explain inequalities in cycling between different social groups (ibid.) and support this discourse further, when writing that the “conventional use of the bicycle reflects and reproduces social norms” (ibid.). At the same time, they state that it also contributes to social change if people start using the bike or cycling in a different way (ibid.) – so perhaps also if a new group of persons starts to cycle. Hence, there is a reciprocal relationship between the society and its individuals, respectively between the individual choice to cycle and the general mobility culture.

There are different theories trying to explain and predict mobility behavior. Traditionally, mobility and traffic research followed determinist approaches to explain mobility-related behavior and decision-making (Götz 2007: 763). Those assumed that every behavior is *determined* by different factors (e.g. different socio-demographic and economic factors as well as the local conditions and infrastructure) and that behaviors thus become predictable (ibid.). The analysis of these factors still forms the broad base of mobility research, but over time was complemented by the application of sociological and socio-psychological theories (ibid.; Dangschat 2017: 34). The socio-scientific mobility research intends to open the „black box“, as Götz calls it, to investigate the decisions that stand behind the incalculable behaviors of the individuals and their reasons and motives - that many times are not as easily traceable as the determinist approach assumes (2007: 760, 763). Among the theories and approaches that contributed to a better understanding of mobility behavior there are the Rational-Choice-Theory (RCT) and the Theory of Planned Behavior (TPB) that acknowledge, first of all, that persons do have a choice in a certain scope, and that their decisions are not merely determined by external factors (ibid.: 764). This scope might be limited by the socio-economic factors and local conditions, but those do not *define* the behavior. While the RCT presumes a completely rational decision-making – taking into account travel times and costs but also more subjective features like symbolic values or perception of safety – the TPB adds the aspects of personal attitudes, individual intentions/motivations, perceived behavioral control, and subjective norms (ibid.: 764f.; Caballero et al. 2014: 317). According to the TPB, „objective“ conditions are always interpreted and assessed subjectively, and it was shown that these subjective attitudes and motivations can have a direct impact on the mode choice: „Someone who appreciates the bicycle as a mode of transport and who furthermore is surrounded by other people that share this view and that want people to cycle, is more likely to cycle than others.“ (Götz 2007: 764). With the aim to complement the TPB, the Model of Goal-Directed Behavior (MGB) was developed, that includes additional factors, like anticipated emotions and past behaviors (Passafaro et al. 2014: 77f.). According to Passafaro et al. it achieves to differentiate between intentions and desires, as there is an important distinction between the desire or willingness of a person to cycle and the actual intentions or commitment to do so (ibid.: 78). Developing the desire to cycle implies to pass from being unaware of the issue and unwilling to change anything to a state of awareness and contemplating about cycling, while the intention to cycle already implies more concrete planning of actions (ibid.: 77f.) – which closes the circle back to the distinction between the conceived and the realized mobility.

2.2.2 Influences on the Choice to Cycle

As a next step it is essential to review how these theoretical considerations apply to the practical case of cycling and which are the concrete factors that impact people’s decision to use the bicycle for their everyday mobility. There are several studies and publications from different contexts that

evaluate those factors that influence the choice to cycle. While many of them focus on certain dimensions or specific aspects only, Bopp et al. (2018: 65ff.) and Parkin et al. (2007) give an overview over a variety of different factors and thus provided a good starting point for the literature review.

A common ground of most publications can be found in the environmental, infrastructural and traffic-related factors. The weather and the hilliness of a city directly impact on people's willingness to use the bicycle, but also the attractiveness of the surrounding environment (street design, trees or green areas, noise, pollution) can have either a positive or negative influence (Bopp et al. 2018: 68; Hausigke 2018: 61f.). The same applies when it comes to the urban structure because the distances, land uses, the urban density, and the localization of relevant spots in the city might be more or less suitable for cycling trips (Bopp et al. 2018: 68ff.; Parkin et al. 2007: 72f.). Regarding the infrastructural factors, the availability, type and quality of cycle paths/lanes, the availability of secure bicycle parking facilities, but also the availability of showers at the workplace can be mentioned as having a clear impact on people's willingness to cycle for their transportation (Bopp et al. 2018: 67f.; Parkin et al. 2007: 78f.; Hausigke 2018: 61f.). In this context, also traffic safety is an important factor as it is directly connected to the quality of infrastructure as well as to other traffic-related characteristics like speed limits (Bopp et al. 2018: 71; Parkin et al. 2007: 77f.). However, as Schwedes et al. (2021) emphasize, cyclists' traffic safety is a very subjective issue that cannot only be evaluated based on the infrastructure – rather it needs to be looked at from the user's perspective, taking into account their perceptions and sensations. Furthermore, the car- and bicycle-ownership as well as the trip purpose have a clear impact on the cycling behavior (Bopp et al. 2018: 67; Parkin et al. 2007: 72ff.).

Also, certain sociodemographic characteristics are found to impact on people's choice to cycle. As argued throughout this thesis, gender is an important aspect in this context. But also other characteristics like age, ethnicity or social class can have an influence on one's disposition to use the bicycle. As it seems, men tend to be more likely than women to cycle (Bopp et al. 2018: 66; Steinbach et al. 2011), and younger persons are more likely to cycle than elderly (Parkin et al. 2007: 74; Bopp et al. 2018: 66). The social class or income has an effect as well but the relation to cycling is not as clearly definable as with the previously mentioned factors, as it relates more to the habitus of the social group (Steinbach et al. 2011). Anyway, depending on the local and cultural context, some studies indicated that cycling is either most common among the lower social strata, or in the higher social strata, or both in the lower and higher social strata but least among moderate income levels (Parkin et al. 2007: 74f.; Bopp et al. 2018: 66). The influence of ethnicity also depends on the local context but seems to show a rather clear effect – in London for instance cycling is most common among white people (Steinbach et al. 2011: 1124), and for the case of Los Angeles Lugo (2013) could at least observe diverse patterns in the bicycle usage among different ethnic groups.

Furthermore, other rather personal factors can impact on a person's cycling behavior, among those the health and fitness status of a person, normative beliefs regarding health or environment, the enjoyment of cycling or the desire to save money (Bopp et al. 2018: 87). However, Caballero et al. (2014) add the importance of habits, that unconsciously have a strong influence in mode choice decisions. Once a person has developed a habit that effectively fulfills their mobility needs, the necessity and motivation to look for alternatives is low (ibid.: 318).

Regarding social and cultural factors, it can be assumed that social support for cycling is an important encouraging factor, as well as being surrounded by other people who cycle or seeing other people using a bicycle (Bopp et al. 2018: 69). Continuing this line of thought, a study by Lugo

(2013) following an ethnographic approach, analyzes the impact of social practices on people's choice to cycle and remarks their importance as a complement to the physical infrastructure. She argues that "human behaviors can be infrastructure to enable certain actions" (ibid.: 203) - in a negative (aggressive motorists, yelling, honking), as well as in a positive way (group rides, networks and activist groups, visibility of cyclists on the road, sharing knowledge, events and activities) (ibid.: 206). According to Lugo, this positive, encouraging "human infrastructure" for cycling has the potential to motivate people to cycle and to change their mobility behavior (ibid.: 202).

Passaforo et al. on the other hand emphasize the importance of emotions and affections for mobility decisions and for developing the desire to cycle. They argue that most cyclists face positive and negative feelings at the same time, as they are aware both of the positive and negative implications cycling might have, but that these feelings might have different origins (2014: 81). Based on their research, they assume that negative emotions might be more strongly linked to social norms or collective beliefs than positive emotions, that are more likely to be based on personal experiences (ibid.: 81f.). That implies that already active cyclists tend to have more positive emotions regarding cycling and thus a stronger desire to use the bicycle than non-cyclists. They conclude that public strategies for promoting cycling need to include changing existent attitudes and norms to create more positive emotions and form the desire to cycle (ibid.: 82). With a similar intention, Horton (2007) analyzes the role of fear in cycling, since it is one of the most common emotional barriers that hinders people from using a bicycle, but also a rather complex feeling as people might experience fear concerning very different aspects in cycling.

2.2.3 Women and Cycling

After this general view on the factors that impact people's decision to use a bicycle, the next step is to apply a gender perspective, to assess either whether there are additional factors that only impact women's decision to cycle, or whether there are factors that are perceived more relevant by women than by men.

To understand the close interrelations between cycling and gender, it is not only interesting to look at the current practices, but also to take a brief historical review. In the late 1800s when cycling became an emerging activity, the bicycle could only be thought in gender categories: Men used it to consolidate their masculinity by forming bicycle clubs, organizing bicycle races, or showing off by "riding recklessly fast in an act of masculine spectacle very similar to a young man 'dragging' a sports car down a main street today" (Mackintosh/Norcliffe 2007: 158). Women, on the other hand, were completely excluded from cycling at the beginning, as riding the high-wheeled bicycles was an exclusive activity for men (ibid.: 157; Garrard et al. 2012: 213). The society found various spurious excuses why women should not be using bicycles, among those that they could not withstand the physical effort, that cycling would cause different diseases in them, or that it could sexually arouse them (Garrard et al. 2012: 214). However, over time women could overcome these restraints, challenging gendered morals, norms and dress codes, and use the bicycle as a tool for their empowerment (ibid.).

In today's society, women still assume different roles, have different necessities and show different mobility patterns than men, and also use the bicycle in a distinct way. All in all, it seems like the bicycle can be a good option to meet women's mobility needs as it is an individual and fast mode of transport that allows to travel short or medium distances, and to have independence and flexibility in trip-chaining – both common characteristics of women's mobility (see 2.1.3). Above

that, considering that women tend to have less economic resources available (see 2.1.1), the bicycle is a rather affordable transport mode as it does not imply continuous expenses for every trip. Still, apparently there are some factors that diminish its appeal.

In general, the studies show that on the one hand there are gender differences in the valuation or importance of impacting factors and on the other hand, that there are also factors specifically impacting women. In demographic aspects, women and men cyclists do not tend to differ a lot (age, income, education etc.), only the indicator of being a parent reduces cycling among women more significantly than it does among men (Bopp et al. 2018: 74; Krizek 2004). The principal factors mentioned to often impact cycling among women are: worries about traffic safety, security issues, care-taking responsibilities, as well as rather social and cultural restrictions (ibid; Steinbach et al. 2011; Emond 2009; Heesch et al. 2012; Emond et al. 2009; ITDP/WEDO n.d.; Lindenberg Lemos et al. 2017).

In the context of traffic safety, the existence of infrastructure, its quality, and the general traffic conditions (separated bike lanes, pavement quality, bicycle parking etc.) are fundamental factors for perceiving cycling as a safe and attractive mode of transport – although not only for women. Nevertheless, it was shown that these infrastructural and safety-related factors might have a higher importance for women than for men (Lindenberg Lemos et al. 2017; Krizek 2004; Emond et al. 2009; Vázquez 2017; Heesch et al. 2012; Beecham/Wood 2013). In contrast, Lindenberg Lemos et al. (2017) warn to apply the simplified hypothesis that the share of women in cycling increases directly only by providing more cycle paths (see also ITDP/WEDO n.d.: 10). Furthermore, they argue that protected infrastructure and separated cycle paths do not solve the problem of traffic safety as the actual issue lies in the lack of traffic education and the lack of mutual respect (Lindenberg Lemos et al. 2017: 86). In this context, Rowe emphasizes the role of cycling education for women to gain knowledge and skills and thus to develop more confidence when cycling (2013: 195; 265).

Considering the personal security, women seem to be more concerned than men and to take certain precautions. Although the personal security is not directly related to cycling, it is a general issue that impacts women's life in public spaces and their mobility (see 2.1). The emphasis is on the real and/or perceived danger of being sexually harassed which women tend to suffer more often than men (Vázquez 2017; Bopp et al. 2018). Vázquez states that women tend to perceive the city as a dangerous and male-dominated place since many have experienced sexual harassment themselves, or since their childhood are told to take care (2017: 123). Hence, they avoid making trips by bicycle at night and prefer travelling during the day instead (ibid.: 122).

Regarding the care-work, it needs to be noted that it usually acts as a barrier for cycling as women are still the main responsables for taking care of the household and the children. Although having children might also encourage women to start (recreative) cycling in order to spend time with the (grand-)children, usually it makes women stop using a bicycle (Bonham/Wilson 2012: 205). In a study that explores cycling along women's life course, childbirth and child-care were mentioned to be events or conditions that lead to not continuing cycling – depending on how the work was distributed between the women and their partners (ibid.: 206). If most of the work was on them, the daily routines with children were seen as too challenging for a bicycle-based mobility, or the bicycle itself was not perceived as suitable for transporting small children plus baggage or groceries (ibid.: 205f). In this context, Riggs and Schwartz (2018) underline that cargo-bikes have a lot of potential for women's mobility as they offer a solution to this issue. Furthermore, traffic safety has

a greater importance when cycling with children, and if cycling is perceived to be unsafe women might prefer other modes instead (Bonham/Wilson 2012: 206; Lindenberg Lemos et al. 2017: 87).

With respect to social and cultural restrictions, various factors need to be mentioned: On the one hand, some authors mention the influence of a cycling culture, so that a high share of cycling in the modal split, the normality and the acceptance of cycling in the society as well as the existence of role models impacts positively on cycling's attractiveness (Emond 2009; Bopp et al. 2018). In contrast, a study of Aldred et al. (2015) suggests that also a general increase of cycling in the modal split does not automatically imply a higher share of women. The study thus disagrees about the simplistic argument that a more equal share can be reached by the cultural normalization of cycling and an increasing cycling presence. On the other hand, the authors mention gendered restrictions that refer to cycling not being perceived as a (hegemonically) feminine activity that does not coincide with women's household-related role (Lindenberg Lemos et al. 2017; Steinbach et al. 2011). Other authors add an esthetic factor - either that generally the physical appearance of cyclists is associated as less (hegemonically) feminine, or regarding labor-related trips, that the physical effort of cycling to work is not perceived as reconcilable with elegant business clothing or make-up (Steinbach et al. 2011; Bopp et al. 2018; Lindenberg Lemos et al. 2017).

However, besides these principal determinants there are other factors that are not necessarily less important for the individual case, but maybe apply less universally. Bonham and Wilson (2012) who approached women's cycling behavior by looking at the whole life course, explored the conditions and events that made women stop, respectively return to cycling after childhood in their adult lives – which in general terms were changes in housing, employment, health situation or family status. Anyway, the interesting aspect of this study is the recognition that there is no constancy in the mobility behavior of a person, and that women experience a “start-stop-start” in cycling throughout their life, depending on multiple factors of their current situation. Lindenberg Lemos et al. state that there might be many women who do not know how to ride a bicycle as they never learned it due to the traditional gender roles and due to the perception that “cycling is for boys” (2017: 86). Furthermore, there might be women who do not have access to a bicycle due to the limited economic resources of the family or due to the gendered family hierarchies, that give priority to male family members to use the private vehicles, whether car, motorcycle, or bicycle (ibid.). Vázquez (2017: 118) adds that a lack of basic knowledge regarding bicycle maintenance and mechanics might imply a barrier for cycling.

Also female-specific corporal changes that occur occasionally or in certain stages of life, as the menstrual cycle, pregnancy or menopause, might imply challenges for cycling. Bennett (2017) investigated pregnant women's experiences in urban cycling and found that not only the changing body and body sensation, but also additional worries and preoccupations of the women, as well as the (lack of) social support impacted on whether they continued or stopped cycling during their pregnancy. Anyway, there seems to be only very little research on how these conditions interfere with cycling, but as the named issues were discussed for instance in a series of livestream-panels by the British cycling organization Cycling UK (Cycling UK 2020), they seem to at least have some relevance.

2.3 Factors of Impact

This section aims at summarizing and operationalizing the factors that might impact on women's decision to cycle or not, to create the deductive basis for the further work. As it became clear during

the literature analysis, it is a complex issue in which a very broad spectrum of factors needs to be considered, ranging from physical conditions to socio-cultural norms to psychological foundations. The following table was elaborated based on a similar table that Vázquez (2017: 118) used to give an overview about possible factors of influence. However, for this thesis it was adapted and extended in order to add missing aspects. It organizes the multitude of possible factors by clustering them according to different dimensions, and it contains factors that impact the mobility behavior in general and cycling – in an overall view but also gender-specifically. Anyway, the table does not indicate the effects each factor has: The factors are looked at in a neutral way as they can function both as a barrier and as a facilitator for cycling, depending on the concrete context.

Table 1: Dimensions and Factors of Impact (own elaboration)

DIMENSION	POSSIBLE FACTORS
SOCIO-DEMOGRAFIC	age, social class, income, education, occupation, family-status and housing situation, place of residence
PHYSICAL-SPATIAL	urban fabric/structure (urban sprawl, density etc.), land use, distances, relief
TRAFFIC-RELATED	extension and quality of bicycle infrastructure (cycle paths, parking facilities), speed and amount of motorized transport, coexistence among different users of public space, intermodality, traffic safety, perceived safety
ACCESIBILITY	availability of different modes of transport, costs and affordability
TEMPORAL	daytime-nighttime, differences during the week, seasonal differences, occasional impacts
ABILITIES	know how to ride a bike, knowledge about how to safely cycle in the city traffic, skills regarding maintenance/repairing bicycles
SOCIO-CULTURAL	gender roles and norms, gendered esthetic and behavioral expectations, milieus/social classes and their norms (habitus), norms of the social group (according to ethnicity, age etc.), long-term technological or social developments, general mobility- and cycling-culture
SECURITY	perceived personal security regarding sexual harassment, assaults, robbery as well as bicycle theft etc.
ORGANIZATIONAL	coordination of daily activities and of specific necessities (e.g. transport goods, accompany children, trip chaining)
PERSONAL ATTITUDE/ MOTIVATION/ DESIRE	health and environmental imperatives, ideologies, individual intentions and motivations
EMOTIONAL	negative and/or positive emotions and affections regarding cycling and other transport modes
TECHNOLOGICAL	availability of technology to increase and facilitate mobility (by bicycle), e.g. mobile applications for route planning, for renting a bicycle etc.

3. CONTEXT OF THE CASE STUDY

This chapter provides a basis for contextualizing the field work and introduces the case study by collecting relevant information about gender inequality, mobility and cycling in Buenos Aires. This information helps the reader to understand the context of the research, the current situation and developments, and forms the framework for the interpretation of the findings.

The city of Buenos Aires (CABA) is the capital of Argentina and an autonomous city with about 3 million inhabitants. However, the actual urbanized area includes various districts of the surrounding Province of Buenos Aires that together comprise the metropolitan area of Buenos Aires (AMBA) with a total population of about 15 million (AMBA Data n.d.).

3.1 Gender (In-)equality in Argentina

This sub-chapter takes a look at the status quo of gender equality in Argentina. For a first impression, the Global Gender Gap Report 2021 from the World Economic Forum provides a valuable assessment of the current situation. The report evaluates 156 states regarding their degree of gender equality in four dimensions: economic participation and opportunity, educational attainment, health and survival, and political empowerment. Argentina is ranked 35 out of the 156 states and scored a 0,752 of a maximum of 1 that would represent complete gender parity – compared to the currently best score of 0,892 for Iceland and the worst of 0,444 for Afghanistan; Germany ranks 11 with a score of 0,796 (WEF 2021: 10). Compared to other countries in the regional context of Latin-America and the Caribbean, Argentina ranks 5 out of 26 (ibid.: 31). Hence, taking a global vision on gender equality, Argentina is comparatively well off and ranks amongst the top quarter of states; in the region amongst the top fifth. Also, Argentina has improved its situation in the past years and increased its score since the first report from 2006 (ibid.: 99). Anyway, going more into detail, the result needs to be seen differentiated. Although Argentina already could achieve gender parity in the education attainment, and almost parity in the dimension of health and survival, in the other two dimensions Argentina is still showing large gender gaps (ibid.). However, these two dimensions, economic participation and political empowerment, are those that also show the largest gender gaps globally (ibid. 5).

Looking specifically at the economic dimension, as it has a very direct impact on people's everyday life, data from the INDEC (Argentinian National Institute for Statistics) and from the ECLAC (United Nations Economic Commission for Latin America and the Caribbean) suggests the following regarding gender equality: Women in Argentina on average worked about 7 hours more per week than men in 2013 - but only 26,4% of women's work time was paid, compared to 65,7% of men's work time (ECLAC n.d.). Hence, Argentinian women do not only bear most of the unpaid care work alone (INDEC 2021a: 21), but also have a lower labor market participation and are more likely to be un- or underemployed than men (ibid.: 10ff.). As a result, the women are less likely to dispose of an income of their own (ECLAC n.d.), respectively if they have a paid job, have a significantly lower income than men (INDEC 2021a: 17ff.). Although the numbers vary a lot among the women depending on their education level or the income quintile (ibid.: 22f.), the look on the whole Argentinian society shows that "poverty has a woman's face" (Botto 2021), as almost 70% of the lowest income group are women – while accounting for only about a third of the highest income group (ibid.). However, as the statistics show, the situation has aggravated due to the pandemic: Women were double as likely in 2020 to be in the need for receiving public subsidies

or welfare than in 2019, and also double as likely as men (INDEC 2021a: 26). Although the share of men receiving welfare even has increased tenfold in this timeframe, their share from 2020 does not even reach women's pre-pandemic share (ibid.). Furthermore, in about 70% of households in the metropolitan area of Buenos Aires, women were responsible for all or at least the majority of the household and care-related work during the pandemic, including home schooling that summed up onto the usual tasks (ibid.: 27ff.).

Apart of these rather clear economic inequalities and the unbalance in the division of labor, gender differences also show in other aspects of life, but there are too many to be discussed at this point. Anyway, at least one more topic needs to be mentioned as it has a direct relevance for women's everyday life and might also impact on their mobility-related decisions: violence and sexual harassment. Although men can also be affected by these problematics, the experience for women is different as in their case the harassment and violence are mostly products of the gendered power hierarchies in society (see 2.1.1). This violence against women in Argentina does not only manifest in its most horrific way in the high number of femicides (ECLAC n.d.), or in the increasing cases of domestic violence during the pandemic (IDB 2020), but also is an issue in the public sphere. A study states that 80% of women in Argentina (and 78% in CABA in particular) feel insecure or very insecure in the public space, especially at night and in poorly frequented and illuminated areas (MuMaLá/ISEPCI 2017: 6ff.). 93 % of the surveyed women reported to have experienced some kind of (sexual) harassment in the street and 100% mentioned to apply certain strategies to feel more secure, among those avoiding being alone or avoiding certain places (ibid.: 26f.). Furthermore, the surveyed women stated to have experienced similar insecure situations especially when waiting for or when taking the public transport, or when traveling by taxi (ibid.: 14ff.). Still, the taxi is perceived as one of the most secure options, and thus is rather popular among women (ibid. 16; see also Figure 5) – despite of the higher costs it implies, what in turn contrasts the previously mentioned fact that women are more likely to be poor.

Even though these inequalities and problematics continue existing (or even worsened due to the pandemic), the public sector of Argentina and Buenos Aires seems to have developed a certain consciousness about them in the past years: At the national level in 2018 the “Micaela Law” has been enacted that obliges all persons in public functions to receive a special training about the gender problematic and about violence against women (Gobierno Argentina s.f.). Also in 2018, the Argentinian government presented its first *Plan de Igualdad de Oportunidades y Derechos 2018-20* (Equal Opportunities and Rights Plan) to promote gender equality and to guarantee conditions that facilitate women's and LGBTIQ's autonomy (Ministerio de Salud y Desarrollo Social 2018). Subsequently, more public attention was drawn to the topic, and some key milestones regarding gender equality and women's rights have been achieved recently, among those the quota for the inclusion of trans-persons into public positions, the legalization of abortion, and various measures to tackle gendered violence (Ministerio de las Mujeres, Géneros y Diversidad 2021). Regarding public projects, in august of 2020 a national plan of public construction work with gender perspective was presented that promotes the integration of a gender perspective into all construction projects (Gobierno Argentina 2020). On a local basis, the city of Buenos Aires started to integrate the gender perspective for instance in its Gender and Mobility Plan (see 3.3).

3.2 Mobility, Traffic and Cycling in Buenos Aires

In its planification the city of Buenos Aires committed to improve life quality in the city and the sustainability of the people's mobility. The city's Sustainable Mobility Plan aims at developing

transport policies that put a focus on the human scale (Buenos Aires Ciudad 2010: 10) by granting a privilege to the non-motorized and public transport (ibid.: 12). Within the framework of the Climate Action Plan 2050 (Buenos Aires Ciudad 2020a) the city renewed and concretized these objectives.

According to the latest domiciliary mobility survey for the metropolitan area of Buenos Aires (ENMODO), the majority of trips are realized by public transport and walking (Terrile 2021: 17) (see Figure 2). The bicycle accounts for about 3% of the modal split and hence only plays a marginal role in the everyday mobility of most persons.

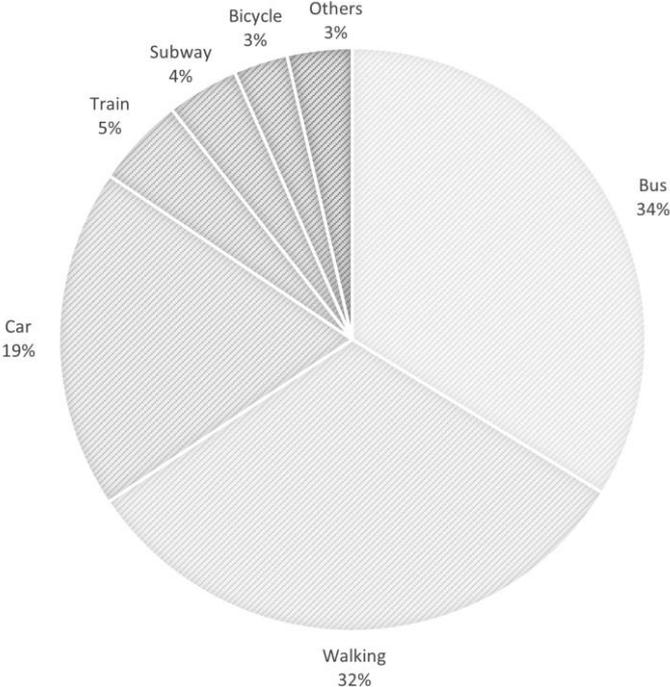


Figure 2: Modal Split of AMBA (own elaboration based on Terrile 2021: 17)

Although the total share of 3% has stayed the same since the mobility survey of 2009/10 (ENMODO 2010: 28), its importance at least in CABA seems to be growing. Since 2010 an increase can be observed in the monthly and annual counts of cyclists at certain points in the city (Buenos Aires Ciudad 2019a), and the city’s estimations about the daily and annual amount of bicycle trips shows the same trend (Buenos Aires Ciudad 2021b). The government of CABA states that before the pandemic the bicycle’s share in the modal split has already risen to 4%, from 0,4% in 2009 (Buenos Aires Ciudad 2021c).

Anyway, the pandemic has changed the mobility behavior significantly. Data about the number of visitors of certain public places, collected and analyzed by Google, indicate that the overall mobility shrunk due to the restrictions (Google 2021). Furthermore, the sanitary measures taken by the Argentinian government included controls to limit the mobility of persons in the street and between the different districts of the city as well as restrictions in the use of public transport. Correspondingly, a survey from May 2020 indicated that the private car, taxis/Uber and active mobility modes (walking and cycling) were most popular to realize trips if necessary (Zunino Singh et al. 2020). Thus, the Covid-19 pandemic has accelerated the already existing tendencies and

increased the importance of cycling even more as it made the bicycle an attractive mode for more persons and created new users (Buenos Aires Ciudad 2021c; La Nación 2020) – probably both for recreational purposes (Lemma 2020a) and for transportation (Buenos Aires Ciudad 2021d). The number of bicycle trips in 2020 has grown by 114% compared to 2019, and also the sales of bicycles have increased significantly during this time (Buenos Aires Ciudad 2021c). Assuming that this trend will continue at least in parts beyond the pandemic, as it might have changed people’s mobility habits on a long run, a future shift in the modal split in favor of the bicycle is imaginable.

The reason for the pre-pandemic increase of cycling can be seen in the related policies of the city’s government: By means of the *Sustainable Mobility Plan* the city actively promotes the bicycle as a mode of transport and formulates four general objectives: 1. developing a network of safe cycle paths, 2. implementing a public system for sharing bicycles, 3. developing bicycle parking facilities, 4. promoting cycling for commuting among office workers (Buenos Aires Ciudad 2010: 21). Without going much into detail and evaluating whether or not the city fulfilled these goals so far, it can be said that there was visible progress at least regarding the first two objectives and some advances regarding the third (see below).

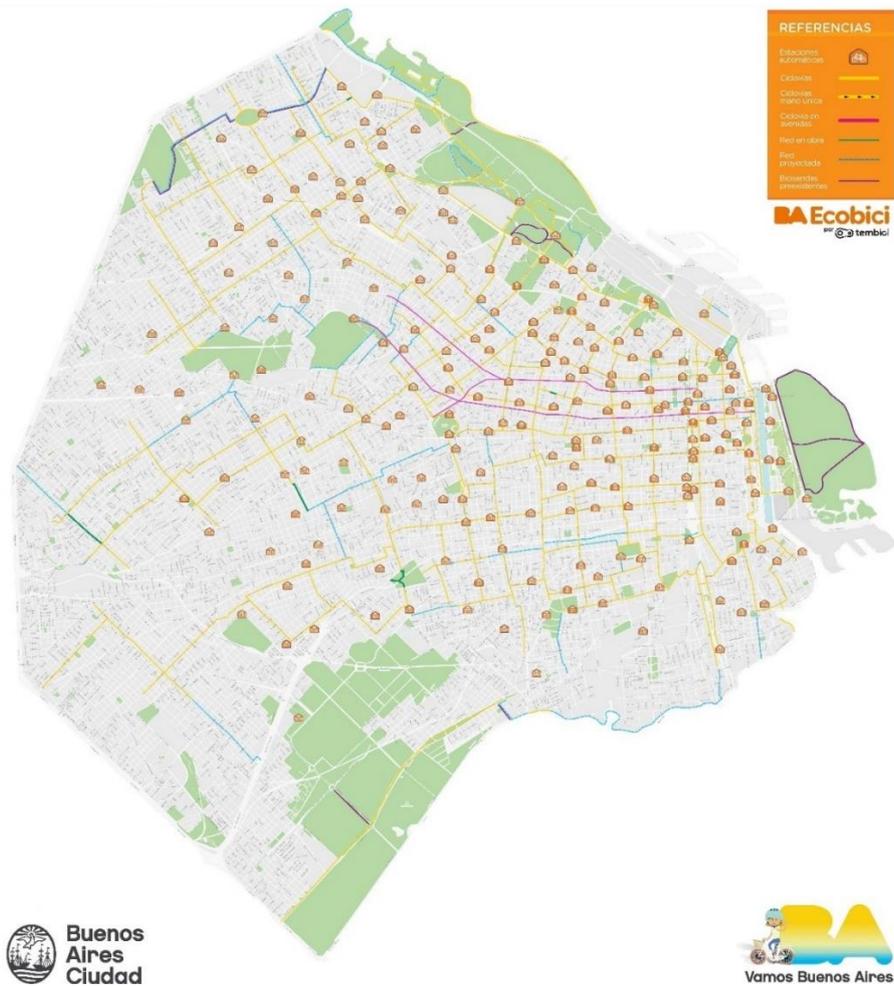


Figure 3: Cycle Path Network and Ecobici Stations in CABA (Buenos Aires Ciudad n.d.d)

The mentioned growth after 2010 corresponds to the gradual improvement of the cycling infrastructure, starting with construction of cycle paths from 2009 on (Buenos Aires Ciudad n.d.a). Currently, the city has a network of cycle paths with a total length of more than 260 kilometers (ibid.). The network covers most parts of the city, but is more concentrated in the north and in the city's central areas in the east. The map in figure 3 shows the existing cycle paths (yellow, pink, purple), as well as cycle paths that are planned for the future expansion (light blue) or that are still under construction (green). The vast majority of the cycle paths are designed as protected, physically separated paths of a total width of 2 meters for two lanes (ibid.) – one in each direction. Noteworthy, as the cycle paths are mostly located in secondary roads, they usually run bidirectionally in roads with unidirectional traffic flow. One of these typical cycle paths is shown in figure 4 to give an impression of the road space and the physical conditions. An exception from this most common type of cycle paths are the ones that were introduced in two of the main avenues of the city, Avenida Córdoba y Avenida Corrientes, during the pandemic (marked in pink on the map in figure 3). There the cycle lanes are wider and used only unidirectional. Anyway, the physical separation by bollards and the green painting on the ground at intersections were kept as central design elements, increasing the visibility of the lanes, and protecting the cyclists' space.

Above that, the public sharing bicycles Ecobici form part of the cycling infrastructure of Buenos Aires. Currently there are 230 stations in the city (Buenos Aires Ciudad 2021e), that are concentrated in the north and east of the city, analogous to the cycle paths (see figure 3; the stations are marked with orange pictograms). Anyway, the system does not seem to be using its full capacities: Cycling activists claim that the number of bicycles never reached the promised amount of 2000 and that the number of available bicycles decreased significantly at the same time (Lemma 2020b). In 2020 during the pandemic, the city's government moreover decided to reduce the number of stations from originally 400 to 200, leaving especially the south and west of the city with even less access to Ecobici than before (ibid.). Regarding bicycle parking, the local law 1752/05 is worth to be mentioned, as it makes it compulsory for commercial car parking garages and off-street parking lots to provide secure bicycle parking facilities as well (Buenos Aires Ciudad n.d.b). According to the city's government, above that more than 5000 bicycle racks have been installed throughout the city (ibid.).



Figure 4: Example of a Typical Cycle Path in CABA (Buenos Aires Ciudad n.d.c)

In the context of the modal split, it is furthermore interesting to observe that women make other mode choices than men (see figure 5). While women are more likely to use the public transport, a taxi or walk, men more frequently use a car, a motorcycle, or a bicycle (Terrile 2021: 18; Buenos Aires Ciudad 2019b: 25). Only the train and subway were rather equally used by men and women (ibid.). The data of the ENMODO also indicate other differences in the travel behavior of women and men in Buenos Aires, which coincide plainly with the general differences mentioned in the literature (see 2.1.3): On average, women make more trips a day than men, but at other times of the day (more off-peak), they make shorter trips and trips with other purposes – less job-related trips but more trips related to care-taking (Buenos Aires Ciudad 2019b: 23s.).

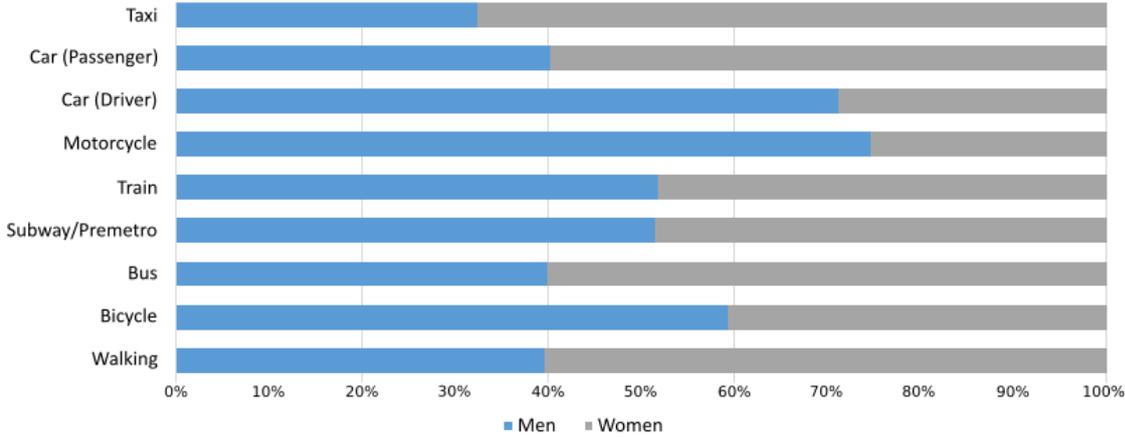


Figure 5: Share of Trips Realized by Men and Women per transport mode in AMBA (adaptation based on Terrile 2017: 18)

Hence, women and men in Buenos Aires show different behaviors regarding the bicycle usage: First, men tend to cycle more often than women. According to data from the ENMODO 2009/10 more than 80% of all cycling trips in the metropolitan area of Buenos Aires were done by men, what made the bicycle one of the transport modes with the highest disparity between women and men regarding the frequency of use (BID 2017: 29). Data from Ecobici (only CABA) supported that the distribution was very unequal - according to those only 24% of all the trips with the public bicycles were made by women (Alalu 2017). However, more recent data from the ENMODO 2018/20 indicates a much lower gender difference in the bicycle usage, as men account for about 60% and women for about 40% of cycling trips in the metropolitan area (see figure 5). According to the city’s government, in CABA the share of women among cyclists increased from 7,2% in 2009 to 21,3% in 2019 (Buenos Aires Ciudad 2021c). Apparently, the overall increase of cycling trips after 2010 also came along with a diversification of bicycle users – maybe also due to the increasing provision of cycling infrastructure in this time, since the city’s government states that at least the new cycle lanes in the avenues increased the share of women that use these avenues for cycling (ibid.). Furthermore, in the past the city’s government used to organize group excursions by bicycle through the city to promote cycling, also addressing women in particular, for instance with the ride “Chicas en Bici” (Girls on Bikes) in 2018 (Buenos Aires Ciudad 2018). Still, a gender disparity in cycling persists.

More in detail, the pre-pandemic data from Ecobici also showed differences in how women and men used the public bicycles in CABA: Women tended to use the bicycles for more time per trip but more constantly throughout the day and not like most men mainly in rush hour (Alalu 2017).

Furthermore, it stands out that among women it was more common to use the same Ecobici station as the origin and the destination of a trip (ibid.), indicating a more recreative usage. However, it is very probable that the pandemic also impacted on these mobility patterns and changed the concrete bicycle usage of women. Supposing that the same logic applies as in the development of the past years, since more people cycled during the pandemic, also the share of women might have increased further during this time and usage patterns might have changed.

When it comes to cycling, traffic safety is an important aspect to consider: As about 80% of the traffic-related fatalities in the city of Buenos Aires correspond to vulnerable road user groups (motorcycles, bicycles, pedestrians) (Buenos Aires Ciudad 2020b: 14), and as the number of cycling trips is increasing, the topic of traffic safety gains importance. Between 2015 and 2019 the fatalities in all user groups dropped, only the number of fatal accidents with cyclists has increased slightly (ibid.: 15). Although the rate stayed constant in proportion to the increasing amount of annual bicycle trips (ibid.), it seems to be an issue that needs to be paid more attention to in future. Incidentally, all fatal victims of cycling accidents in 2020 were male (Buenos Aires Ciudad 2021f: 18) – but as it were “only” five cases in total in this year, and as men’s rate in cycling but also in traffic fatalities is generally higher than women’s, this detail is not surprising. However, with the *Traffic Safety Plan* (Buenos Aires Ciudad 2020b) the city of Buenos Aires formulated a strategy to follow in order to increase traffic safety and to reduce mortality in traffic accidents – in accordance to the UN’s sustainable development goals and to the idea of a vision zero. The Traffic Safety Plan aims at implementing measures regarding four pillars: safer traffic infrastructure, control and supervision, communication and education, as well as commitment and participation (ibid.). Regarding the third focal point, the city organized publicity campaigns and educative programs to build awareness around the topics of traffic safety and safe traffic behavior and to “transmit the values of respect and coexistence” (Buenos Aires Ciudad 2020c: 23) – for instance by means of the *Cyclists’ Manual* (Buenos Aires Ciudad 2016) giving an introduction to urban cycling. Judging by the anthropologist Pablo Wright, such kind of educational policies might be crucial in addition to infrastructural changes to increase traffic safety (2010: 6): By analyzing people’s traffic behavior in Buenos Aires from a cultural point of view, he observed that besides the institutional legal framework that is supposed to regulate the coexistence in the traffic, there is another layer of legality - the *habitus vial*, so the actual behavior of road users, or the road culture, that is opposed to the norms (ibid.: 5). For the case of Argentina he states: “We have a system of road practices that works in parallel with the normative one. [...] The criteria of size, speed, and to less extent, gender and/or type of vehicle determine the right of way. It is a system of presence, which ignores the theoretical weight of the written rules.” (ibid.). However, he argues that by understanding road behavior as a social act and by implementing educational policies, a cultural transformation can be effectuated (ibid.: 6).

3.3 Existing Policies, Plans and Actions

At a local level, the city of Buenos Aires already made first steps regarding the integration of a gender perspective in the mobility sector. Based on the study *Ella se Mueve Segura* (engl. *She moves securely*; CAF/FIA Foundation 2018) about the security of women in Latin-American cities, one of the first measures in this spirit was the creation of a hotline in 2018 to report cases of sexual harassment in public spaces and public transport, and to provide support for victims.

In 2019 the city government presented the *Gender and Mobility Plan 2020-2023* (Buenos Aires Ciudad 2019b) that analyzes the mobility in CABA from a gendered point of view and develops an action

plan for the subsequent steps. Among its objectives are the promotion of gender equality in general and the inclusion of a gender perspective into the design and implementation of public policies, especially into those of the Transport Secretary (ibid.: 40). Anyway, it does not only aim at providing better transport services and infrastructure, but approaches the issue with a broader vision, including to minimize violence and sexual harassment or to increase the presence of women working in the sector (ibid.). Furthermore, the plan gives an overview about the policies and measures taken in the past that are seen in accordance with the current plan (ibid.: 42ff), among those: the implementation of the BRT system (Metrobus) for providing more security at the bus stops and a level access to the busses; the installation of a hotline to report sexual harassment in public transport; the installation of video cameras in public transport; the provision of a mobile application function to order taxis with women drivers only; the designation of safe routes around schools; the promotion of jobs for women for instance as taxi-, bus- and subway-drivers; the installation of the Ecobici public shared bicycle system and the cycle paths for safer cycling. Regarding the latter point, the city government emphasizes that women's share of inscriptions in Ecobici has increased due to being safer – but generally the plan does not go beyond the argument of safer infrastructure to promote cycling among women. As the public transport is the most utilized mode by women in CABA, the goals and the action plan focus mainly on this mode. Nevertheless, the plan also highlights the potentials of cycling: “For being free of charge and practical for short and medium trips, the bicycle is the ideal transport to satisfy the particular necessities of women's mobility.” (ibid.: 43). Despite this, the plan presents only few concrete actions with respect to urban cycling. Anyway, it recognizes the need to develop a qualitative-quantitative study to provide further information about the everyday use of the bicycle by women (ibid.: 65). In a meeting with three transport-responsibles of the government, their narrative regarding this topic (Reunion 2020) was rather similar. They were aware of the different necessities and mobility patterns of women, as well as concerned about their low share in cycling – but had to concede that they were lacking gender-specific strategies or tools to tackle this issue that exceed the general cycling promotion policies. According to them, their only approach or strategy was to improve the infrastructure, assuming that women's participation would increase automatically as the total share of bicycle trips increases.

Based on this first general Gender and Mobility Plan, in June 2021 a *Methodological Guide for Transport Planning with a Gender Perspective* was published (Buenos Aires Ciudad 2021a). The guide focuses on how to integrate a gender perspective into the planning process and design of mobility and transport systems. It proposes approaches for gender-inclusive transport planning throughout the whole planning process and specifies methods and measures to apply in practice, giving insights by means of a practical example from Buenos Aires (Centro de Tránsito Federico Lacroze, Chacarita). Furthermore, the annex of the document collects potential actions to take regarding a more gender-inclusive infrastructure and design, also specifically regarding the cycle paths and the sharing bicycles (see chapter 6.4).

Above all these public policies, there is a strong civil society movement in Buenos Aires with respect to cycling. The activist groups organize different projects, campaigns, courses and workshops to teach how to ride a bicycle or to repair bikes, or to educate cyclists about their rights or traffic rules. Among those activist groups there is even one – *Pedalea como una piba* – that focuses on a feminist perspective and organized activities especially for women, trans or non-binary persons.

4. METHODOLOGICAL FRAMEWORK

This chapter describes how the research topic was approached during the elaboration of the thesis. The diagram in figure 6 provides a general overview of the activities and the steps taken in the process.

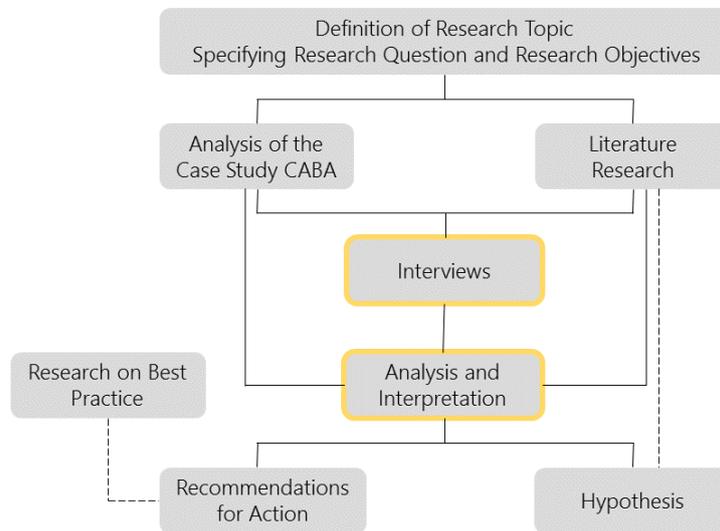


Figure 6: Research Process (own elaboration)

The annotations in this chapter regarding the methodology focus on the two highlighted steps in the diagram, the interviews as well as their analysis and interpretation, which represent the field work carried out for this thesis. The defined research objective (see 1.2) that concerns this empirical part of the work needs to be further specified in order to break it down into manageable sub-goals:

Objective:

- Identify the factors that impact on women's decision to cycle in CABA, whether facilitators or barriers, considering different dimensions such as spatial (urban fabric, infrastructure), traffic-related (other transport modes, traffic, traffic safety) and socio-cultural aspects (perceptions, experiences).

Sub-goals:

- Integrate existing theoretical knowledge about cycling facilitators and barriers.
- Get insights about the mobility behavior and cycling experiences of different women in CABA.
- Identify the dimensions and factors of impact and understand the interrelations between them.
- Analyze and understand the reasons and motivations for the individual behavior (within-case analysis).
- Compare the different cases, find parallels and differences between them (cross-case analysis).
- Find starting points for the generalization of the results and for the development of a hypothesis.

In accordance with these sub-goals, the research design for the work was developed. The next section of this chapter presents general considerations and the research design for the empirical

part, while the subsequent sections describe and discuss the exact methods used for the data collection, sampling and analysis.

4.1 Research Design

The research on the intersection of gender and cycling in this thesis builds upon the case study of the city of Buenos Aires and thus needs to take into account the specific local conditions with influence on the object of interest (see 3.). In order to approach the aspect of gender in this topic, a very simplified vision was applied: In the context of this work, gender is differentiated only binarily between men and women. Anyway, due to the very limited scope feasible for this thesis, the investigation focuses on women's perspective only, and intends to produce in-depth findings regarding their perspective, rather than a comparison between women's and men's views.

As the thesis' aspiration is to address the topic of women and cycling in the context of Buenos Aires in a very broad manner, it needs to adopt a rather exploratory approach. Exploratory studies can be useful to get first insights into a topic, especially in areas that are not much investigated yet (Stein 2014: 136; Hernández Sampieri et al. 2010: 79). Although in this case there is already a lot of research done (regarding mode choice, gender and mobility, gender and cycling; see 2.), most of this research was either conducted in different geographical and socio-cultural contexts (USA, Europe, Australia), or the studies had a narrower perspective, focusing for example only on infrastructural preferences – making an exploratory study-design for the specific case of Buenos Aires reasonable. Anyway, in order to not ignore the existing studies and theories, but to take advantage of their results, the thesis follows a deductive logic to include them as a theoretical base for the research. The factors of impact, summarized in the previous chapter, are taken as a guideline throughout the interviews and especially during the coding and analysis of the data. Still, the work adapts characteristics of an inductive logic as it needs to be open to other, case-specific, relevant aspects. In summary, this work tries to combine and balance a theory-testing and deductive approach with a rather exploratory perspective on the topic for the specific case of Buenos Aires. Most of the mentioned dimensions and factors of impact are most likely transferable to Buenos Aires – what suggests simply applying and proofing them for the case study. Yet, it can be expected that the conclusions partly differ from those of the existing studies – due to the local cycling conditions as well as to the specific urban and socio-cultural context. Hence, the thesis aims at exploring the specific case of Buenos Aires in an open and encompassing way as well.

For investigating the research question, a broad spectrum of influential factors needs to be considered (see 2.3) that might vary in their relevance and importance in each personal case. Due to this complexity and individuality of the topic, but especially considering the exploratory nature of this work, only a qualitative research approach seems to be reasonable. Qualitative research allows to address aspects that are not possible to detect with quantitative methods, it allows to understand and explain interrelations in complex social actions and behaviors as it is in the case in mobility and mode choice, and it allows to produce in-depth data that can form a basis for subsequent investigations or decisions (Reichertz 2014: 68ff.; Parkin et al. 2007: 79).

4.2 Interviews

The main method chosen for the field work was qualitative interviewing. In order to keep the interviews open and to provide a setting that permits the interviewees to make their individual

perspectives clear, the interviews were conducted in a non-structured way, what also corresponds to the exploratory nature of the work and is crucial to provide proper qualitative data (Hernández Sampieri et al. 2010: 418). It was considered more expedient to let the women express what seems important to them, than to ask a specific, standardized catalogue of questions to all of them. Hence, during the interviews, the focus was on reacting to what the interviewees reported, asking follow-up questions, and letting them come up with the relevant themes – with the aim of representing the individual case of the woman, her particular context, feelings and experiences etc. Open or non-structured interviews are based on a general interviewing guide that only defines certain contents (ibid.). Thus, the interview-guideline (see annex) includes less binding or chronologically organized queries, but more open questions, topics, key words, or invitations to narrate. Anyway, the necessity to propose topics during the interview or to intervene with questions varied in every case, as some of the women were more talkative than others or knew better how to express their perceptions. As the list of possible factors of impact (see 2.3) was too extensive to be considered in all of its facets, the interventions in most cases focused only on some specific topics: Not only due to my academic background of urban and traffic planning but also because of the tendencies marked in the existing literature, the cycling conditions were a central topic, especially the cycling infrastructure and the traffic climate that are closely related to the perceived traffic safety. Also socio-cultural perspectives in a broad sense and security issues were made a common theme in the conversations. Nevertheless, all of the stated dimensions of impact could be brought up at least implicitly. Due to this selectivity, there were topics that were discussed in all case, while others varied among the participants due to the intended openness of the interviews and the different relevance for each person.

On average, the interviews had a duration of about one hour and, as interviews in person were not possible due to the pandemic, in most cases were realized via videocall. This came with some challenges: First, because of the spatial independence of the interviewees, a good atmosphere for conversating was not always given during the whole interview – in some cases there were loud background noises that impeded hearing, or the interviewees were distracted by other things. Second, technical problems and weak internet connections lead to interruptions and inconveniences that impacted on the atmosphere and fluency as well. Furthermore, in three cases (participants P10, P11, parts of P12) where a videocall was not possible, the interviews were realized via voice messages since for some participants it was difficult to find a quiet lapse of time to have the interview. The voice messages facilitated a more flexible and adaptable kind of interview and allowed me to talk to women that otherwise would not have participated. Anyway, a difficulty was that the talk was more interrupted and that a direct interaction (via mimic etc.) was not possible, although it did not seem to affect the atmosphere too much. Despite of being problematic in qualitative research precisely due to this lack of personal interaction, this kind of asynchronous communication still can provide usable and valid data for the investigation (Ehlers 2017).

4.3 Sampling and Field Access

The population for the investigation, so the group of people that is defined to be the general group of interest of the research (Berndt 2020: 1), comprises all women in Buenos Aires who are potentially able to ride a bicycle. According to the research questions and objectives to investigate the facilitators and barriers of cycling, this population includes women who currently do use the bicycle as well as women that currently do not but potentially could, to incorporate both the user and the non-user perspective.

Since in this case the population is very extensive, but the sample size can only be relatively small due to the qualitative research design, the sampling process gains even more importance and has a direct effect on the quality and scope of the results. Because of these characteristics of the population and of the qualitative research design, a probability sampling was not feasible nor reasonable. Instead, a combination of non-probability sampling strategies – convenience and purposive sampling – was applied. These non-probability strategies involve that the sample can be prone to be more subjective and biased and less representative or generalizable (Andrade 2020: 3). Hence, in this section I disclose my approach and the criteria used to select the participants for the interviews to make the process transparent and examine the sample critically.

In the first place, the aim of the sampling was to achieve the greatest possible heterogeneity to comply with the broad, open approach of the exploratory study design. Therefore, a maximum variation sampling was chosen, that can be used to represent different perspectives on a complex phenomenon in order to identify differences and concordances, or patterns and particularities (Hernández Sampieri et al. 2010: 397). This implies a purposive sampling strategy, so the selection of the sample according to the researcher's subjective assessment based on certain rules and criteria (Berndt 2020: 3). The underlying criteria to select the women for the interviews were the heterogeneity of socio-demographic factors as age, social strata, personal situation (being mother, occupation) and place of residence, as well as the individual level of usage or experience with cycling (frequent, infrequent, non-user; recreative or transport). Furthermore, in some cases, certain individual attributes regarding cycling influenced the sampling because they were considered to contribute a new perspective, e.g. being a bicycle messenger, using a cargo bike, or being a person who recently learned cycling. The sampling process was carried out in an iterative process, constantly evaluating what types of profiles were already represented or still lacking in the sample and, in consequence, focusing the search on a specific profile.

The access to potential participants according to these criteria was relatively challenging. My possibilities to personally approach different women was limited because I was not in Buenos Aires while conducting the empirical part of the study. But even staying in Buenos Aires, personal contacts as well as the possibility to get in touch with women in (activist-) groups or other events would have been almost completely restricted due to the pandemic. To compensate these conditions, the search was focused on social media – Facebook and Instagram – where I contacted possible key persons or gatekeepers (as bicycle activists, *Pedalea como una piba*, and a cycling teacher) with the intention that they could connect me with potential participants for the study. This strategy was not successful since they either did not respond or rejected the request. Only one woman that I contacted directly via Instagram because of her specific profile agreed on an interview with me (P11 – with cargo bike). Furthermore, a request was published in cyclists' groups on Facebook where a part of the participants could be recruited (namely P4, P6, P7, P10). The difficulties of this procedure were, on the one hand, that most of the persons who responded had a rather similar profile, which meant that a further selection among them was necessary. Also, a more specific request, for instance for women living in the south of CABA (where the neighborhoods of the lower social strata are more concentrated than in the north), did not bring the expected results. On the other hand, the anonymity and dynamics of social media sometimes impeded to gain the potential participants' confidence – in one case a person in the comments started to accuse me of being a male pervert aiming to collect women's contacts and other people joined in until I got blocked from the group.

Anyway, since the search via social media was not effective enough to recruit the whole sample, a snowball sampling was initiated starting from my personal contacts that spread my request. Again,

from the number of respondents some were selected according to the criteria mentioned above. In total, 6 participants were gained through personal contacts and their contacts (P1, P2, P3, P5, P8, P9). Although this generally led to much more diversity among the participants according to age, personal situation and level of cycling usage, the academic middle class was still overrepresented. So, a new snowball process was started, again starting from personal contacts, but this time specifying the search on women from lower social strata, in which one more participant (P12) could be found.

In both strategies, in the search via social media and in the snowball method, the majority of the persons who generally were interested to participate, had similar characteristics: around 25-35 years old, frequent bicycle users, middle class, often academic background, without children. In the case of the snowball method, this can be explained by the characteristics of myself, of my contacts and of their contacts that are all relatively similar, especially regarding the social strata. In case of social media, younger persons are more inclined to actively use them than elderly; very frequent cyclists are more likely to connect with others in Facebook groups than infrequent users (or even non-users); mothers can be expected to have less time available to use social media; and for persons in more precarious situations even the access to internet and devices can be complicated. Indeed, also the request itself – searching participants for a study about cycling – already might seem more appealing to active cyclists than to non-users, despite explicitly including non-users in the request.

In total, 12 women could be recruited – living in different parts of the city, with and without children, in an age range from 19 to 60, bicycle users of different levels as well as non-users (see 5.1). The (highly educated) middle-class dominates the sample – but also within this middle-class, important differences in the economic stability and personal situation become visible. However, the sample could not achieve heterogeneity regarding other aspects as well that potentially influence women's mobility or cycling behavior, as for example their ethnicity or disabilities. Also, no women from the southern part of the city (where cycling infrastructure is less concentrated) could be interviewed. Furthermore, the small sample size realizable in the scope of this master thesis cannot fully represent the whole complexity of perspectives and situations – in combination with the sought heterogeneity of the participants, the results can neither be seen as representative for the whole population, nor as theoretically saturated. Anyway, the sample accomplished to be relatively diverse and heterogeneous and thus serves the exploratory aim of this work.

4.4 Data Processing, Analysis and Interpretation

All interviews were recorded and transcribed (see annex). Transcripts of audio material can provide a more accurate and detailed representation of the interview that facilitates the coding and analysis of the data (Evers 2011: 7). Furthermore, Evers points out that even the process of transcribing itself can serve as a first step of analysis since the researcher starts to get an overview as well as a deeper understanding of the content (ibid.: 8). In this case, a pragmatic transcription format was chosen (ibid.: 9), so a “cleaned-up” verbatim reproduction of the spoken, leaving out stammering etc. as well as further descriptions (pauses, tone of voice etc.). Also, some parts of the records, especially the chitchatting at the end of the interviews or at the beginning of voice messages, were not transcribed since they were not considered relevant for the research. Due to problems with the internet connection and partly also to language difficulties, some gaps in the transcripts were unavoidable. But since they only concern single words or small parts of phrases, they are not significant and do not affect the validity of the data.

The transcripts were then coded and analyzed following the approach of the Qualitative Content Analysis according to Mayring. It is a method used to sort qualitative data from any kind of communication, mostly in form of texts - as in this case transcripts of interviews (Mayring 2015: 12; Mayring/Fenzl 2014: 543). The approach does not only serve the interest in the mere content of the transcripts but can also be used to detect and include latent and subjective meanings (Mayring/Fenzl 2014: 543). The method stands out due to its systematic approach following explicit rules what makes it a transparent and comprehensible analysis tool (Mayring 2015: 12f.). Considering the relatively open and unstructured data that was gathered in the interviews, the very structured and systematic approach of the Qualitative Content Analysis, especially regarding the code book, can contribute to organize the information and gives a framework to compare the very individual cases, to find parallels and discrepancies. Furthermore, the Qualitative Content Analysis is a theory-based method that aims for looking at the concrete data in a bigger context, relating it to the theoretical background and to previous research (ibid.: 13). In case of this work, taking into account the broad base of knowledge and theories about mode choice decision-taking in general as well as gender-specific considerations and necessities discussed previously, it seems expedient to integrate this theoretical base into the analysis of the data collected in the interviews in Buenos Aires. This also facilitates in a later step to relate and compare the results to the existing research.

Based on these considerations, a codebook was elaborated that was used to guide the coding, analysis and interpretation of the data (see annex). The codes were mainly defined in a deductive manner by taking as a base the table from chapter 2.3 that summarizes the factors of impact (barriers and facilitators) on women cyclists taken from the existing literature and research. Since this table already covers many important and very different dimensions, it was considered an excellent starting point and structure for the codebook. Anyway, during the coding the codebook was adapted following an inductive approach: new codes emerged, codes were renamed, merged, deleted, or split – respecting the actual content of the interviews. Still, it was observed that the deductive categories and subcategories suited most of the text passages relatively well.

The analysis and interpretation of the coded data collected in the interviews had to find a balance between two different levels: first, the individual case level and second, the cross-case level. Since the principal objective of this work is, in a general manner, to identify possible facilitators and barriers for cycling that should be rather generalizable, the focus is on the cross-case analysis, comparing the different cases. Anyway, the perspective on the individual cases is essential to obtain meaningful results. Due to the heterogeneity of the sample, it is important to understand the individual background and situation in life as a context for the behavior and decision-taking and thus for the interpretation of the interviews. Therefore, in the first part of chapter 5, all the interviewees are presented and briefly characterized, also giving an overview over the sample on a whole.

With the aim of synthesizing general explanations for the use, respectively non-use of the bicycle, the statements and opinions of the participants are summarized and compared in their contexts, identifying parallels and contradictions as well as patterns and exceptions regarding each of the relevant factors of influence. For this purpose, the method of *thick description* was chosen. Not as one might suppose, the thick description goes beyond a mere accumulation and summary of facts and details but starts to interpret the content of the interviews together with the context, circumstances, intentions, and meanings, and tries to reproduce the participant's thoughts and feelings (Ponterotto 2006; Akremi 2014: 280f.). In this effect, many direct quotes from the interviews are used to illustrate and support the analysis and interpretation. Most of the quotes speak for themselves and thus can transmit the essence of the data in a better way than any

paraphrase – hence, an adequate translation of them becomes all the more important. For the sake of readability, the quotes were only included in their English translation and were grammatically adjusted.

Finally, the results of the interviews are put into the context of the existing research. The objective is to prove whether or not and how far the mentioned factors of impact apply to the case of Buenos Aires, or whether there are other factors that influence women's decision to cycle. Based on these results of the empirical part, the thesis attempts to develop outcomes into two directions – first, it formulates a hypothesis to break the findings down to a more generalizable conclusion. Although due to its scope the thesis does probably not achieve to contribute to theory formation, the hypothesis might at least give impulses for further research. Second, and more importantly, the thesis envisions concrete action strategies and measures for how to increase women's participation in cycling in the case of Buenos Aires.

5. WOMEN'S PERSPECTIVE ON CYCLING IN BUENOS AIRES

The following chapter presents the results of the empirical part of the research. After presenting the interviews' participants more in detail, the factors that were found to be relevant for the women's decision to cycle or not are being described and discussed. Finally, the most important findings are summarized and discussed against the background of the theory and context. Also, some hypotheses for further research are being developed.

5.1 Introduction to the Sample

As mentioned previously the sample consisted of 12 women who live and/or cycle in the city of Buenos Aires. The following map and table give an overview over the characteristics of each woman. While the map visualizes the current places of residence, the table contrasts the information about age, occupation and level of cycling as well as some relevant key points. The occupation is not only relevant as it implies certain mobility patterns, but also since it gives clues about the social position or social class of the persons. Regarding the level of cycling, the women were categorized into three groups according to the bicycle usage at the moment of the interview: non-users (currently do not cycle at all); infrequent users (cycle every once in a while, and mostly for recreation); and frequent users (utilitarian cyclists that realize at least some of their everyday trips by bicycle). This information is important since it helps the readers to familiarize themselves with the individual backgrounds, which is the basis and context for the rest of the chapter that summarizes, compares, and interprets the content of the interviews. To protect the privacy of the women, the interviews were anonymized, and the names were replaced by a numbering from participant P1 to P12, in the chronological order in which the interviews have been conducted.

Table 2: Interviewees (own elaboration)

	AGE	OCCUPATION	BIKE-USAGE	COMMENTS
P1	35	Architect	Non-user	Does not own a bicycle and in the past only cycled on rare occasions in Buenos Aires
P2	38	University Lecturer	Infrequent	Mother of three children of 11 and 8 and of 4 months; started recreational cycling during pandemic
P3	57	English Teacher	Frequent	Bicycle is her main mode of transport for commuting and other trips
P4	27	Student of Anthropology	Frequent	Bicycle is her main mode of transport for commuting and other trips
P5	30	PhD Student	Infrequent	Started cycling during the pandemic; used to cycle with a borrowed bicycle

P6	50	Bicycle Courier	Frequent	Started working as a courier after losing her job in the pandemic; did not cycle before
P7	34	Currently produces and sells yoghurt and kimchi	Frequent	Learned riding a bicycle during the pandemic and now cycles for almost all her trips; from Colombia
P8	40	University Lecturer	Infrequent	Mother of a son of 10; started recreational cycling during the pandemic; uses Ecobici
P9	60	Sociologist	Frequent	Besides walking, the bicycle is her main mode of transport; is very sporty
P10	19	Bicycle Courier, Bicycle Mechanic and selling cycle-clothing	Frequent	Cycling is her lifestyle (self-description); cycles for work and recreation
P11	34	Manages a shop and gives workshops	Frequent	Mother of three daughters of 10, 8 and 5; owns a cargo bike in which she used to transport her children
P12	40	Housewife and studies nursing	Non-user	Mother of two sons of 21 and 3; never used a bicycle in Buenos Aires but used to cycle in her hometown



Figure 7: Places of Residence of the Interviewees (own elaboration based on Buenos Aires Ciudad n.d.e)

5.2 Factors of Impact

The following chapter presents the results of the interviews according to the different factors of impact that were found to be relevant for the women's choice to cycle or not. The factors were arranged similar to the different dimensions defined in chapter 2.3, starting from the concrete physical and more tangible conditions, continuing with social and cultural aspects and ending with rather psychological and individual perspectives.

Some of the dimensions are very broad and contain various factors. In order to help the reader orientate, these dimensions were further broken down into subtopics, indicated by sub-headlines in the text. Since most of the factors are somehow interconnected with each other, there are topics that are discussed or mentioned various times, although trying not to be too repetitive. In order to visualize the overlaps and connections, many times a reference to the corresponding section was inserted. Quotes and data from the interviews were referenced with line numbers from each of the corresponding transcripts (see annex).

5.2.1 Urban and Spatial Conditions

The daily mobility of the women and their choice to cycle or not, is affected by the urban structure of the city of Buenos Aires mainly in two ways – first, by the mere extension of the city and second, by the distribution of land uses throughout the city. Both factors eventually impact on travel distances. Certainly, it depends on where the woman lives and where she needs to go for her daily activities. In general, the neighborhoods are of a mixed land use, so all the everyday shopping and errands can usually be done close to the home. Anyway, Buenos Aires is a very central city that concentrates many functions, especially work and culture, in the city center and thus generates trips from the periphery.

Persons like P3 or P4, who live in central parts of CABA and who can reach their workplace or faculty as well as other relevant places within maximum half an hour of cycling, appreciated the bicycle as an efficient mode of transport for commuting and other trips. Especially during rush-hour, the bicycle is probably faster than a car or bus and more comfortable than the overcrowded subway.

"Here in Buenos Aires it is very convenient to travel [by bicycle], you know, the distances, I move here in the capital all the time." (P3: 59-60)

"Everything I do is about half an hour bike ride away, 40 minutes at the most." (P4: 65-66)

On the other hand, the women living at the periphery of CABA, close to the province, as P1, P2 and P5 – all of them non-users or recent users – tended to perceive their commuting distances as too large for cycling. For P2 it is about 8 km to her office (P2: 24) and for P5 the distances to travel every day were even longer since she studied about 11 km from her home in the faculty at night, but additionally worked in another part of the city during the day (P5: 16ff.).

"All this routine [...] made it impossible for me to use the bicycle as a useful and valuable mode of transportation. First of all, I think because of the distances, because I never lived close to my work as if I could say I cycle to work". (P5: 35-37)

Also P4 indicated that she has been in a similar situation when living in her previous neighborhood – so even women who are used to cycling for their everyday trips might not be willing to travel too long distances on a daily basis.

"I moved to Villa Pueyrredon [...] and then I abandoned the bike a bit because everything was too far away. And riding a bike meant spending an hour and twenty minutes on the bike, like going to the faculty was an hour and twenty minutes on the bike." (P4: 31-34)

In the same way, almost all the trips leaving CABA to go to the metropolitan area are not considered to be practicable by bicycle due to the large distances. P2 mentioned that on those days where she needs to go to the province for her work, she always uses her car (P2: 111-117). The combination with the train can be an option in this case, for example as P6 does for her daily commute (P6: 44-45) - but might not work well in every situation, depending on the concrete origin and destination since the rail network of the metropolitan area is not very dense (see 5.2.2).

Nevertheless, whether a person considers a distance to be long or not is relative – it is very individual, it depends on the specific conditions and it is probably strongly linked to the personal cycling level and experience. P8 for instance experiences cycling as something challenging and stressful and thus even relatively short distances seem very long (P8: 210-211). P7 experienced that for her as a total cycling beginner, short trips that might normally take about 15 minutes, took her up to one hour (P7: 65-66). P9 on the other hand, enjoys cycling and estimates that she travels about 30 km by bicycle on average every day (P9: 312-315). And P11 emphasizes that travelling with children strongly impacts on how she perceives distances since she must adapt to what is feasible for her children (P11: 153-154/240-242; see also 5.2.9).

5.2.2 Infrastructure

This chapter studies how the women perceived the physical cycling infrastructure in Buenos Aires. The principal tendency of the stated opinions was that the bicycle is not sufficiently being considered in the planning of streets, public spaces and buildings yet and that many times cyclists have to struggle with a lack of infrastructure.

"What we have is a cycle paths - period. In other words, there is no other type of infrastructure for cyclists." (P9: 395-396)

The two aspects of infrastructure that dominated the interviews were the cycle paths as well as bicycle parking since they impact most directly on the comfort and experience of cycling concerning safety and security issues. Furthermore, the chapter takes a look at the public bicycle sharing system Ecobici and at the aspect of intermodality.

Cycle Paths

The existence of cycle paths and infrastructure can be a motivator to cycle – or at least their absence can be an important discouraging factor. The mere presence of cycling paths is strongly connected to the perception of safety - independent of their actual design, whether they are a separated, "safe" space for bicycles or not, most of the non-users or infrequent/recent users mentioned it as a crucial aspect for their decision to cycle and whether they feel safe or not.

"I don't idealize them, it's not that I say, ah the cycle paths are superior, they are the solution for a lifetime - no, but I would like to have cycle paths where I live. [...] It affects me a little not having bike paths in my neighborhood, having to walk 40 blocks to find the first bike path. It ends up being a bit of a complication.." (P5: 88-100)

The interviews showed a relatively clear tendency that the participants generally preferred the cycle paths over cycling on the street. Though, with increasing experience in cycling, the cycle paths seem to lose a bit of their importance. On the side of cycling beginners, for example P2 sometimes walks or uses the sidewalk for cycling if there is no cycle lane (P2: 264-270) and P8 even takes detours to avoid streets without cycle paths (P8: 222). Others, like for instance P4 and P5, prefer the cycle lanes but are also fine with cycling in smaller streets with little traffic (P4: 184-194; P5: 270-289). Even more experienced cyclists, as P9 and P10, in some cases even prefer cycling in the avenues with lots of motorized traffic because it is much faster for them (P9: 324-326; P10: 284/374-38). P9 summarized the value of the cycle paths the following way, pointing out the importance of the sensation they provide for cyclists:

"[The cycle path] enables people who didn't dare to cycle on the street, so they feel more protected - which is not true, I don't think the bike path protects you more. Because a yellow line does not make a difference, a yellow line painted on the ground does not make any difference when they open the door of a car that hits you, it's not like that. But in the imagination it works like it protects you." (P9: 365-369)

Regarding the conditions of the cycle paths, the statements can be grouped into two main categories – one concerning the extension of the network and the other concerning their quality. As mentioned before, the general tendency showed that the women perceive a lack of infrastructure and this also applies to the cycle paths: Most of the participants stated that there are not sufficient cycle lanes in the city of Buenos Aires but, as argued before, that it would facilitate cycling for them. Anyway, the availability of cycle paths depends on where the person lives and moves since the infrastructure is not equally distributed throughout the city (see 3.2). This unequal distribution is an issue that some of the women were conscious about and that they considered important to themselves, their mobility behavior and their comfort when cycling:

"There are neighborhoods where it is much more developed, and perhaps it is because of the infrastructure that invites you more to get on a bicycle, to ride a bicycle. And there are neighborhoods, for example in the neighborhood where I live, in Villa Urquiza - Parque Chas, there are no bike paths." (P1: 168-171)

"When I get further away from Microcentro and the very central part, Belgrano, up to Belgrano there are bike paths - but sometimes I have to go to Coghlan, which are neighborhoods in the outskirts, further away, and there are places where there are no cycle paths. But no, usually I try to take the bike path, which is the most comfortable for everyone and the most orderly." (P6: 220-222)

On the other hand, they also considered it problematic for other people and saw it as a social problem in a bigger framework (see 5.2.7) that some people, especially from lower social classes in the south of CABA, have less access to cycling infrastructure than others.

"When I think about the social problems of the city, the cycle paths are in fact much more concentrated in the Recoleta area and downtown than in the southern zone. If they send you by bike to the southern zone, where to go - there is one, three, four, five streets with bike lanes. I mean, like passing the highway." (P4: 259-262)

Due to this unequal distribution of infrastructure, cycling becomes more visible only in some areas. Especially non-users or infrequent users – that do not already cycle wherever they need to go – hence might perceive cycling as more adequate in some areas than in others or associate it only to certain parts of the city. Some districts will obtain the image “bicycle-friendly”, others will not – which as a result might increase the mentioned social distinctions and the disparities in cycling usage on a spatial level. So, it is not only the infrastructure itself, but also the *image* of the place that

is created that in the end might impact whether cycling is seen as an option for a trip to this area or not (see 5.2.7). P2 for instance considers some places to be “predetermined” to go with the bicycle because of the perception she has of them and also P1 seems to have a relatively clear idea in mind to which places she could go by bicycle or not:

“I use routes or paths that are very predetermined by the cycle path - I don't know, for example, from Plaza Irlanda to the botanical gardens, from Plaza Irlanda to Plaza Italia - as I know that there are tracks with a lot of bike paths.” (P2: 298-301)

“There are neighborhoods with a lot of infrastructure, neighborhoods with zero infrastructure, and neighborhoods with little and bad infrastructure. So the choice [to use the bicycle or not] depends a lot on where you move.” (P1: 189-191)

Concerning the quality of the cycle paths, the opinions of the participants were relatively diverse, but they had in common that they were very critical. The only exceptions were P12 who never cycled in Buenos Aires (P12: 20) and thus could not comment on this topic – and, surprisingly, P6 who spends the whole day cycling as a bicycle courier and who had a quite positive view on the cycle lanes.

“I love them [...] just the way they are. Yes, because you just fit precisely, there are two lanes, you have the one that goes with the bike and the one that comes back, and yes, we pass each other very well and we go very smooth on both sides, with this space no problem to pass.” (P6: 299-305)

It is interesting that all the other women evaluated the very same characteristics as fairly negative which shows the individuality of the perceptions and the subjectiveness of these opinions. Still, the overall tendency regarding the quality and design of the cycle lanes was very clear. First, the women perceive it as a problem that the cycle lanes are bidirectional. Since all the streets in Buenos Aires are unidirectional, the bidirectional cycle paths can cause conflicts or accidents with cars or pedestrians at the intersections and thus are seen as a danger (i.a. P2: 301-307; P3: 269-272; P4: 185-188; P11: 296; see also 5.2.3). In this context, some of the women mentioned a lack of signaling on the cycle lanes and the street which they consider important to alert pedestrians and cars about the bidirectional cycle path (i.a. P3: 167-168, P8: 241). Second, all the women commented that the cycle paths are too narrow (i.a. P9: 310-312; P7: 354-355; P3: 249) – especially because they are bidirectional and cyclists need to pass the contraflow with very little distance, what impacts directly the perception of traffic safety and commodity.

“When I'm on a cycle path and I see someone coming from the other side, it's like sometimes you actually slow down and let them pass, due to the fear of brushing against each other.” (P5: 328-330)

Third, the women criticized the pavement and the conditions of the street that lead to uncomfortable situations or even accidents and also make them feel unsafe. Particularly, they pointed out the inclined gutter, so the slope on the side of the curb, that always forms part of the cycle paths (P3: 250; P7: 62; see figure 4) as well as the very common gullies on the cycle paths with gaps running parallel to the cycling direction (P4: 273-275). Also the partly uneven and bumpy pavement and the cobble stone in some streets was mentioned to be a restraint for cycling sometimes (i.a. P6: 360-366; P3: 265-266). P4 even commented that in some streets she just prefers to get off the bicycle to walk some blocks when she sees that the street is in really bad conditions (P4: 194-197). Indeed, one of the very few accidents she had was due to the gullies in which her wheel got stuck. P6 says that she makes detours to avoid certain streets with cobble stone what makes her take more time for her deliveries (P6: 360-366). Anyway, P11 points out that the

pavement in CABA is still a lot better than the street conditions she experiences when crossing General Paz to the province of Buenos Aires where once her bicycle broke indeed (P11: 391-400).

Some of the women stated that in certain situations or under certain circumstances they prefer to cycle on the street instead of going on the cycle path. Although the same person might generally prefer the cycle paths, their deficient design and conditions sometimes make cyclists feel less safe or less comfortable than cycling on the street – which eventually makes one question the actual sense of the cycle paths. P9 described the cycle paths as “insufferable” (P9: 361) and “hostile” (P9: 353) in some situations and P4 explained that especially in case that she goes contraflow of the cars, she perceives more risks and prefers taking another street without cycle path (P4: 185-188). P11 even says that she generally refuses the cycle lanes due to feeling unsafe – but that on the other hand, she still prefers them as a more protected space when she is traveling with her children:

“I hate the cycle paths, it's safer for me, except with children, it's safer for me to go without a cycle path than with a cycle path. Because it is two-way, it feels very dangerous”. [...] “I only use the cycle path if I go with my daughters, like we all go together, carefully [...] and it gives me a little more peace of mind to use it there than if they had to ride alone on the street.” (P11: 294-296/211-213)

In contrast to this, the new cycle lanes on the avenues, all unidirectional and more spacious, were mostly perceived as an improvement compared to the normal ones and many of the participants highlighted them as a progress (i.a. P3: 198-199; P7: 142-143; P8: 68-72). Anyway, the opinions among the women differed clearly, again depending on the personal experiences with cycling. While P8 still cannot feel safe on the new cycle lanes mainly due to the cyclists that use them contraflow (P8: 70-74), P10 sees them as a regression and her rights as a cyclist restricted by them since she claims the same right for all users to appropriate the road space (P10: 338-339).

Despite all criticism, the women generally acclaim the investments and improvements in the cycle paths that the city made in the past years and appreciate the noticeable change they experience in the city (P7: 339-341) – for instance with the implementation of the cycle lanes in the avenues as the most recent development. But also in the long-term view, the positive evaluations seem to predominate, like P9 summarizes:

“There are many cycle paths in Buenos Aires compared to before when there was nothing [...] but in the last few years the number of bike paths really increased, and you can get anywhere in the city on a cycle path.” (P9: 361-364)

However, the overall message seems clear: The cycle paths do display a lot of deficiencies and problems - but despite of all these flaws, after all they are still better for cyclists than the streets of the city would be without them. Especially less experienced cyclists perceive the cycle lanes as a valuable protected space. The cycle paths that were implemented in the past years are a good starting point, but it needs more of them, they need to be equally distributed throughout the city and the existing ones need improvement to make cycling feel safer and more comfortable (not only) for women.

Bicycle Parking

Regarding bicycle parking facilities the situation is different: The women agreed unanimously that many times the lack of parking infrastructure in Buenos Aires can be a decisive barrier for using the bicycle. The question of where to leave the bicycle at the place one needs to go, is present every time a person decides on whether to cycle or not and matters to everyone in the same way.

"Right now you have to think about - what do I do, where do I leave it, how do I get it on, where do I leave it, where do I go, where is it safe, that I don't have to put it in a parking lot that besides is underground, you have to carry the bike there - come on, it is all not ready yet.." (P7: 220-223)

The lack of secure spaces and installations to leave the bicycle is naturally closely related to the fear of bicycle theft (see 5.2.8) what makes the women not want to leave their bicycle just anywhere locked up in the street. There might be trustful and confident persons as for instance P4 or P11 who are not afraid of leaving their bicycle in the public space, but even for them bicycle parking is an everyday issue: P4 mentioned that she uses a strong lock that gives her a rather secure sensation (P4: 230-236;), while P11 reported that her cargo-bike might just not be as attractive for thieves as it is more conspicuous and less handy, respectively more difficult to ride (P11: 439-444). Anyway, even in case of being willing to leave the bicycle simply locked in the street – P4 questions at which place to leave it and where to lock it (P4: 234-238). Indeed, it was mentioned various times that there is a lack of places in public space to leave the bicycle, as for example bicycle racks on the squares and in the parks – and this also might impact on the mere recreational cyclists (i.a. P5: 297-300; P2: 253-254). But even if there were bicycle racks in the public space to lock them up, most women would not feel secure about their bicycles due to the fear to being stolen:

"If I leave it on the street, no matter how many chains you put on it, I know that this chain is good for about an hour and they're watching it and when the hour comes, they broke it and that's it, they took my bike." (P9: 391-393)

Anyway, the more important question is where to leave the bicycle in case of using it as a mode of transport to go to work or to do other activities because the women perceive that most of the places they want or need to go do not offer them a secure space – neither at their offices and workplaces as P2 (P2: 354-358) and P5 (P5: 38-39) emphasized, nor at other places like shops and bars (P7: 215-217; P4: 394-396). It became clear that in case of doubt of where to leave the bicycle, the women prefer not to cycle but choose another mode of transport instead:

"If I know that I have to go to a place where my bike cannot enter, then I prefer not to take it rather than leave it tied up on the street, mostly because of insecurity." (P10: 48-50)

"Unfortunately, there are many places where I cannot go because I do not have a place to leave my bike. There are not many bike racks here. That's a problem because I do not want to leave it on the street for fear of theft." (P3: 31-33)

The option to leave bicycles in the car parking garages does not seem to be used very often by the participants, only P9 mentioned that she frequently uses them (P9: 408). Apparently, many times it is not practical or attractive enough in everyday life since there is not always a garage close to the place one needs to go or, in some cases, the garage owners do not cooperate and do not accept the bicycles.

"I would have no problem leaving it in one place and walking 5 blocks. But a person who has to go to many places and has to make this trip by bike, if they leave it in one place, walk 5 blocks, come back, look for it, leave it in another place, walk 3-5 blocks.... what are they cycling for?" (P4: 242-245)

In case of having a cargo bike like P11, the situation might even be more complicating, especially because a cargo bike also comes with higher monetary value and thus more concerns for security. For instance, she could not find a parking garage that accepted to keep her bicycle (P11: 225-227) – although other women remarked the same problem in garages for their normal bicycles as well (i.a. P8: 176-177). Generally, P11 is not worried about someone stealing her bicycle, so she parks it anywhere on the street, but she is conscious about the problematic and that it could be a barrier

for those who also think about buying a cargo bike (P11: 518-521). Another difficulty in this context is where to leave the bicycle at home since it cannot be brought into most apartments due to being big and heavy and occupying much space. Nevertheless, this also might be a problem for normal bicycles if there is not enough space in the apartment and no other secure space in the building to park the bicycle (P7: 217-218; P8: 173-176). In case that there is no elevator, it might also just be very impractical and complicating to use the bicycle – especially when planning trips with children.

"I live in an apartment, third floor by stairs. So my cargo bike is downstairs, [...] but the other bikes are three stories up the stairs, so whenever I have to go downstairs to cycle with the girls, I have to carry so many bikes downstairs. And that is a big contra." (P11: 244-249)

All in all, the general lack of (secure) bicycle parking facilities in Buenos Aires – in the public space, in places the women need to go as well as in residential buildings – is a considerable barrier for the choice to cycle and needs improvement.

Ecobici

There was only one participant, P8, who was using the public, shared bicycles Ecobici. The system permits her to cycle and to do short excursions with her son on the weekends although she does not own a bicycle herself (P8: 55-57). She commented that the system mostly works well for her but that the stations sometimes have some technical problems that should be resolved.

"The stations that have the electricity supply with solar panels, so the stations that have many trees disconnect and disconnect all the time. So that one works quite well, but then you go to leave one and it does not receive it because the station is without electricity, the system does not work very well, but at least the one I have close to me generally works." (P8: 152-156)

P5 adds that many times no bicycles were available at the stations she saw or that they were not in good conditions (P5: 261-262). P8 also frequently noticed people lining up at stations to pick up a bicycle (P8: 156-159). Hence, it seems like the system does not correspond anymore to the apparently high demand. Furthermore, both mentioned that the time slots that are free of charge are too short for their purposes (P5: 254-260; P8: 139-144). Here, the city's intention to provide bicycles for short transportation trips collides with the wish to have a bicycle available for rather recreative trips. Anyway, the availability of Ecobici is an issue. P1 and P5, who do not own a bicycle or at least not permanently, are potential users of Ecobici - but since both are living at the periphery of CABA, they do not have a station close to their home and thus taking Ecobici is not an option for them (P1: 257-259; P5: 252-254). In their case, using the public bicycles implies a more complicating trip with at least one more change of transport modes in between (ibid.):

"I never used Ecobici because I don't have an Ecobici station very close to my home, so I would have to go to take the public transportation to get off at an Ecobici station, then see what's going on." (P5: 252-254)

"It was like adding transfers. [...] If you don't have a station near your house, it's really not that effective either." (P1: 259-262)

Overall, it seems like Ecobici has a lot of potential to decrease barriers of cycling – especially concerning the financial accessibility of bicycles (see 5.2.4) and the lack of secure parking facilities (see 5.2.8). However, it must be assured that the infrastructure is in good conditions and that the

supply meets the demand in quantity, but also in a spatially and socially inclusive matter, as again the infrastructure is concentrated in the central and northern parts of the city.

Connection with public transport

The possibility to combine the bicycle with the public transport is especially relevant for the women living more at the periphery of CABA or in the metropolitan area. P6 who works as a bicycle courier, organizes her daily commute to CABA by train (P6: 44-45) and P11 regularly uses this option when she needs to travel large distances with her children that they could not travel by themselves (P11: 207-209). But also P4, living in the city center mentioned that she likes to combine the train and the bicycle in case that she has to travel longer distances (P4: 145-147). All of them seemed to be quite pleased with the existing service in the trains. Anyway, maybe coming along with the increasing bicycle usage, the boxcars of the trains where the bicycles are transported are often too crowded, especially at rush hour (P6: 340-347). Particularly P11 with her cargo bike sometimes is confronted with the difficulties of not having enough space.

"In the boxcar I never had any inconvenience, maybe also because I get on the train with the bike and three girls. [...] But [...] it takes up half the boxcar. So, in rush hour [...] I got on and people helped me at their best, but because it is only one cargo-bike. If they had to take two cargo-bikes, the whole wagon would be full. So, in order to promote the usage of cargo-bikes, there should be bigger boxcars, bigger spaces." (P11: 455-460)

Another issue is the access to the tracks with the bicycle. Again, especially for P11 and her cargo bike this implies difficulties since it is too heavy to carry on the staircase and in case that the train station she wants to go does not have access ramps she needs to get off the train at the anterior or subsequent station (P11: 415-421). P4 observed a similar situation for the subway where usually there is no access without staircases.

"I think you can take your bike onto the subway now. I do not understand how you take the bike in the subway because the truth is that going down all these stairs to then go back to... I mean, what type of bicycle do you need to have?" (P4: 454-456)

But also if there are ramps, as for instance in the railway under- and overpasses, usually they are too narrow and at the corners where one needs to turn, at least the cargo bike is difficult to maneuver, and it takes a lot of time to pass them (P11: 420-427; 470-477). A similar situation happens at the fences at rail track crossings where one needs to go in zigzag. In these cases where there is not enough space to maneuver, P11 needs to lift the bicycle to turn it which means that she has to unload the bicycle and the children have to get off (P11: 461-469).

So, even if the general service to combine train and bicycle can be an important facilitator for cycling, especially on long distances or when travelling with children – these kinds of small details in the design and infrastructure can make a big difference, can complicate the trip, or can even make it impossible for women to use this option.

5.2.3 Traffic

This dimension summarizes the traffic-related factors that go beyond the physical infrastructure that has been discussed in the previous section – although naturally it is closely related to it. This chapter deals with the perceived traffic safety and the “traffic climate”, which refers to the traffic

behavior of cyclists and other road users as well as to the atmosphere and social interactions on the street.

Traffic Climate

As the participants stated, the general traffic climate in Buenos Aires is characterized by a lack of respect for other road users as well as for transit rules and spaces, creating a competitive or even hostile atmosphere and unsafe situations. All the women mentioned this aspect in some way when describing their experience in the city traffic and it concerns all groups of road users – pedestrians, cyclists, and motorized vehicles. This lack of compliance with norms and regulations shows in different ways:

According to most of the women, a lot of conflicts with pedestrians arise due to persons not respecting the cycle paths as exclusive spaces for bicycles, and strolling, running, or walking their dog on them (i.a. P8: 318; P3: 225-226). Anyway, many of these clashes with pedestrians might not originate because of their intentional misbehavior, but as a result of the ill-conceived design of the cycle paths (i.a. P3: 269-272; see 5.2.2). Since most streets are unidirectional, the bidirectional cycle paths cause confusion and people are not used to look to both directions before crossing.

"[The cycle paths] run against the traffic, so for example if you are a pedestrian, you always get hit by a bicycle. Because you tend to look where the car is coming and, boom, you oversee the cyclist. Sometimes you get off the sidewalk and hinder the cyclists a lot because you do not understand that you need to look both ways when crossing. You are more attentive to the cars. That happens a lot, and it happens while you are on the bike that you have a lot of people walking and they don't even see you – but because they are watching out for cars." (P2: 302-307)

Regarding cyclists, the women commented that many do not respect the direction of the cycle paths (i.a. P5: 278; P3: 216), that some ignore red traffic lights (i.a. P3: 215-216), do risky maneuvers when passing other cyclists (P10: 359-360; P3: 213-214), or generally travel either too fast or too slow (according to the personal evaluation; P10: 347-349; P3: 216). P9 also noted that problems occur due to the increasing number of cyclists on the cycle paths which are not prepared to handle a rush hour of cyclists (P9: 153-157). From her personal experience, P6 added for the case of bicycle couriers, that they are often pressed for time and thus go fast and for instance ignore red traffic lights (P6: 528). Indeed, some of the misbehaviors or conflicts the women mentioned to occur with other cyclists might as well be induced or at least aggravated by the deficiencies of the cycle paths. For instance, the inclined gutter or the drainage grids make cyclists use the opposite cycle lane and go contraflow, and the narrowness of the cycle paths obstructs the possibility to safely pass other cyclists when traveling with different speeds. Another possible reason for the sometimes risky or inappropriate behavior of cyclists can be seen in the lack of knowledge on how to safely cycle in the city traffic (see 5.2.6). On the other hand, at least P6 and P10 perceived the atmosphere among the group of cyclists as more pleasant, understanding, helpful and solidary (P6: 194-197; P10: 138 / 318). P10 describes her attitude towards other cyclists the following way:

"Well, and among the cyclists [...] I feel a friendlier energy. [...] So I try to [...] give them their space, not to pass them abruptly, to make them feel comfortable because at some point I was also in their place, in the place of vulnerability, of not knowing how to ride, because there is no cyclist more dangerous than the one who does not know how to ride. And I try to give them space and not judge them if they make mistakes." (P10: 311-316)

Not surprisingly, the coexistence with the motorized traffic seems to be the most problematic for cyclists since there is a strong imbalance of power and protection between these two user groups as well as a rivalry about road spaces. Similar to what has been described previously for the pedestrians, the women indicated that also cars and motorbikes do not always respect the cycle paths. According to them, it is common to see that drivers park their cars on the cycle paths (i.a. P2: 283; P10: 360), that motorcyclists go on the cycle path (P10: 350; P7: 344), or that they hurry the cyclists (P6: 255; P10: 351). Also, the previously mentioned conflicts that result from the bidirectionality of the cycle paths in unidirectional roads apply to the motorized traffic – car drivers often do not notice the cyclists that go contraflow of the street (i.a. P4: 186-187), which is a common experience among the woman and may cause severe accidents. Other critical points that the women mentioned were that cars and motorbikes do not keep enough distance when passing cyclists (P8: 266; P5: 97-98) or do not put a turn signal (P7: 385). Cycling among cars, especially on streets or avenues with a lot of traffic and congestion or at rush hour, seems to be closely associated with feeling uncomfortable and being afraid of having an accident (P6: 254-258; P2: 258-259). In this context, many participants highlighted the specific role of busses, cargo trucks but also taxis since they are considered an even greater risk, due to their apparently imprudent driving style or due to their mere size, which makes the women perceive the disparities of power even more (i.a. P4: 214-216; P5: 93-94). P10, having her personal experiences in mind (see below), summarized bluntly:

"They are inside a car, they have brakes and they have an accelerator and they have four wheels. In other words, they can run over us whenever they want, they can leave, escape whenever they want. They can stop abruptly and make us smash our faces against their car whenever they want without anything happening to their car." (P10: 369-372)

For the everyday cycling experience of the women, this sometimes crude and conflictive coexistence with the other road users – whether due to intentional misbehavior or induced by deficiencies in the infrastructure – implies that they not only perceive the traffic as unsafe, but that they actually are confronted with risky or aggressive situations, or even experience accidents (i.a. P3: 222-224; P10: 76-78 /51-59). Some of these conflicts might originate because most people are not yet used to share the road with cyclists (P4: 305-306; see 5.2.7) but for some participants it also seems to be part of the normal “road culture” of Buenos Aires (P1: 65; P10: 282ff; c.f. 3.2 *habitus vial*):

"Here we are like very wild, [...] here everybody wants to go fast, they pretend to be very cool, and they pass traffic lights and pass you, they do not let people pass, that's it. And well, also the public transportation, the streets, it's pretty aggressive." (P7: 92-96)

In this context, some of the interviewed women also experienced quite harsh encounters while cycling - ranging from verbal attacks to physical aggressions against their bicycle: P8 for example commented that she and her son sometimes get insulted by other cyclists because of apparently cycling too slow for them (P8: 98-101). P4 remembered a situation where a car drove onto the cycle path right in front of her without seeming to notice her on her bicycle - and when trying to confront the driver with his fault he got very aggressive.

"And I said, 'hey, you have to look' - and the guy told me 'suck my dick' - he lowered the window and shouted at me. [...] And that time I was afraid - I thought, if I tell him, 'hey, you have to look because I was there and you didn't see me, you almost hit me' [...] - I was surprised by the confrontational reaction, like 'suck my dick'. And then I thought if this guy was armed and a little bit crazier..." (P4: 359-366)

P10 went through a similar situation with a taxi driver. When they got into each other's ways she had to get off the bicycle and wanted to confront him – but he drove on and ran over her bicycle, destroying it completely (P10: 50-59). – Although these might be singular and extreme cases, they show a general tendency of how women might perceive the traffic climate in Buenos Aires. All of these situations one experiences in the street, can make cycling a very unpleasant activity what in the end might be an obstacle for cycling (see 5.2.10). Of course, the traffic climate, the lack of compliance with regulations and the sometimes aggressive atmosphere, are the same for all road users – but as a cyclist one is more likely to be a target of aggressions due to being less accepted (see 5.2.7), as well as more exposed to them than for instance car drivers in their relatively protected and cushioned space of the private vehicle. Regarding this point, P2 described her sensation the following way:

"On the bike I feel very exposed. [...] And in the car I feel safe, that's the reality, in the car I feel protected, I feel isolated, I avoid all these issues, sometimes some cussing if they realize that you are a woman, maybe some swearing anyway, [...] but not much". (P2: 63 / 78-81)

Other modes of transport thus might seem more attractive, as one is less subject of the aggressions of others. In general, feeling “exposed” or “vulnerable” were expressions rather commonly used by the women to describe their experiences in traffic (see below) – not only due to how they perceived the traffic climate but also the traffic safety.

Perceived Traffic Safety

The aspect of traffic safety can be seen as the crucial point to which the previously mentioned factors come down in the end, since the infrastructure and physical conditions as well as the behavior of the road users directly imply consequences for the objective and subjective traffic safety. According to the literature, a perceived lack of traffic safety is probably also one of the most important barriers for women to cycle – and the interviews support this impression since it was a dominant and recurrent issue that seemed to be charged with a lot of emotion (see 5.2.10).

This observation applies independently of the individual cycling experience of the women – the more experienced and frequent cyclist among the participants were as concerned about the topic as the infrequent and non-users. The frequent cyclists either reported that they are always alert when they are on the street, that they cycle with a lot of caution (i.a. P3: 214-215; P6: 209; P7: 42-43; P9: 216-218) and that they take extra measures to increase their safety (especially P4 who emphasized always using a helmet, lights and a reflective vest; P4: 53-54) – or, as P10 described her way of dealing with the risk, that she not only got more cautious in traffic over time (P10: 132-133), but also toughened herself with her experiences, coinciding with her self-description of being somewhat “brute” (P10: 72) and not minding to fall or hit herself.

"I'm pretty exposed all the time and very used to that kind of things. [...] I already know that by getting on the bike I am completely risking my life and that it can go either very well or very badly. I say, well okay, I know that the risk exists, so I completely ignore it." (P10: 88-92)

Nevertheless, P10 perceives herself as “vulnerable and very exposed” (P10: 388) as a cyclist and comments that she feels nervous from time to time before getting onto her bicycle due to being conscious about the risk she is taking (P10: 131-133). Interestingly, this sensation does not hinder her, nor the other more frequent users from cycling – in contrast to the other, less cycling experienced participants that have a very similar perception. And although the more frequent users were also more likely to already have experienced an accident they continued cycling. Probably, the

habit of cycling, being used to go anywhere by bicycle and associating it to mainly positive aspects (see 5.2.10), countervails the perception of risk. Anyway, among the infrequent and non-users, the traffic safety was referred to as one of the defining factors of not using the bicycle.

"You can provide the city with a lot of infrastructure, but if you are on the street and you feel that in the first block a car is going to pass without respecting the traffic light and run over you, you are not going to cycle either. [...] Because obviously, being on a bicycle you are much more vulnerable than being on a vehicle, on a motorcycle. [...] In other words, I think that with road safety and better infrastructure I would be encouraged to cycle much more. (P1: 293-301)

Indeed, for P12 the perceived risk of cycling in the city traffic is the main reason that she never used a bicycle in Buenos Aires – although she enjoys cycling and used to cycle for her transportation in her (rural) hometown (P12: 46-50). She says that she is afraid of the cars, of the traffic and that even imagining using the separated space of the cycle paths does not soothe her worries (P12: 74-75/77-78). According to her, she would not venture to cycle in Buenos Aires – only maybe if it were on a barricaded street without vehicles or in a park (P12: 81/137-139). In her case, it does not only seem to be her personal impression of the traffic safety, but for instance also the experience of her son, having an accident with a taxi when cycling, that shape and confirm her perception (P12: 88-90; see 5.2.7). This factor could be observed in other cases as well: The experiences and accidents of friends or family members (P3: 222-224) and even news or publicly available reports (P8: 281-283), seem to act like a confirmation of the individual perception the women might have, creating the sensation of an “objective” risk and thus influencing how the women perceive the traffic safety in Buenos Aires and their decision to cycle or not.

Anyway, the (perceived and actual) lack of traffic safety is one of the most important barriers for cycling. Protected and exclusive cycle paths can increase the sensation of safety for cyclists but could only truly be safe when they are designed and built in a way in which they do not cause even more dangers and accidents. On the other hand, the risky behavior of some road users (drivers, pedestrians, and cyclists), being little compliant to transit rules and little complaisant, can affect the physical comfort and integrity of the women. Hence, it seems like the conditions in Buenos Aires do not sufficiently provide the sensation of traffic safety – what makes some of the women come to the following impressive conclusions:

"The cycling experience in Buenos Aires is not pleasant, not pleasant at all." (P2: 7-8)

"I feel that the city of Buenos Aires is not adapted for cyclists and even less for women cyclists, [...] you can ride in the city, but only with lots of precaution". (P1: 122-124)

"The street is a lot of fun, it's a lot of fun to cycle, to dodge, everything – but only if you have reflexes. If you do not have reflexes and if you are a beginner - no, the city of Buenos Aires, no, no, no, no and no." (P10: 324-326)

5.2.4 Accessibility

The accessibility of cycling and of other modes of transport delimits the frame of possible mobility options from which the women can choose for each of their trips. Hence, to evaluate the reasons for women to cycle or not, it is also necessary to consider their alternatives and to review the pros and cons of each at least briefly.

Walking and the public transport were the common ground for all the participants. Nevertheless, even regarding the public transport there were some differences in the accessibility - besides from

individual preferences, whether the women liked it or not to travel by public transport (crowded busses and subways, waiting and travel times etc.). First, there are disparities due to the location of the home and the connectivity: Some women, like for example P1, live in areas of the city that are very well connected to subway, bus and train and thus consider the public transport as very convenient (P1: 36); others like P5, living more peripheral, commented that her daily commute with public transport was less comfortable since she always had to change at least once and combine bus and subway (P5: 22-26). Second, traveling with public transport does not seem to be considered the best option for traveling with children (see 5.2.9). P2 stated that she always goes by car when accompanying her children due to being more comfortable and less stressful than public transport (P2: 151-153). The experience of P11 is very similar and she prefers to take her children by car or by cargo-bike. Anyway, P11 also mentioned the high financial burden that using public transport implies for having to buy tickets for her and her three daughters every time (P11: 178-183). Third, the pandemic and the restrictions to use public transport during the lockdown limited or even inhibited the access to public transport for almost all people in Buenos Aires (see 5.2.12) implying the need to look for other transport options.

Only 3 out of the 12 participants - P1, P2 and P11 - currently own a car and use it for their transportation. Besides P1, the other two women, as mentioned above, mainly use the car when making trips with their children or in case they need to travel larger distances. However, P11 commented that until recently she did not have a driver's license and did not have a car at her disposal, what made her use the bicycle with her daughters and was one of the reasons for her to buy her cargo-bike (P11: 15-17). P9 on the other hand, commented that she actively decided to abandon her car some years ago to mobilize herself in other ways and currently only sometimes uses the car of her husband (P9: 79-80).

Apart from the private car (what had been expected), the disparities of accessibility surprisingly were most severe in cycling – especially regarding the financial barrier to buy a bicycle. For some of the participants – P3, P7 and P9 – the accessibility did not seem to be an issue since none of them mentioned difficulties in purchasing their bicycle or bicycle parts recently. All the other women were at least conscious about the high costs, or even have or had difficulties themselves to buy a bicycle. It can be assumed that the pandemic had a great impact on this topic due to the skyrocketing demand for cycling, the reduced supply, and surging prizes (see 5.2.12).

Among the interviewed women there were 8 that at the moment of the interview owned a bicycle and from the 4 that did not have a bicycle, only P12 did not show any interest in owning one due to her fear of cycling in the city of Buenos Aires. P1 commented that she would find it practical for some trips but since she does not see any necessity for her mobility, and adding the risk of bicycle theft, she considers it a too large investment (P1: 46-73/320-329). P5 and P8 both were actively searching for bicycles, but according to them they were hardly affordable with prizes between 30.000 and 40.000 pesos (340-455 USD¹)– which corresponds to about half of P8's and almost the total of P5's monthly salary – and even used bicycles were not much more economic (P5: 406-413; P8: 171-180/40-41). Hence, P8 preferred to buy a bicycle for her son first, while she keeps using the public Ecobici (P8: 53-55). Similar to this, P2 commented that it was difficult for her to buy bicycles for the two of her children to teach them cycling (P2: 174-175). Correspondently, the financial burden for P11 when buying her cargo-bike 6 years ago has been even higher and it costed her a lot of effort (P11: 91-110). According to her, a cargo-bike like hers

¹ Assuming the official US dollar exchange rate of about 88 pesos per dollar from 08.02.2021 when both interviews were conducted (according to exchangerates.org).

would cost about 200.000 pesos (2.270 USD²) nowadays and thus is even a lot less affordable for most people than a normal bicycle (P11: 541-545). Furthermore, the high costs also imply problems in case that a part of the bicycle breaks or needs to be replaced. P11 commented that some of her friends cannot afford to maintain their bicycles in the way they needed and to fix all the necessary parts, and thus can only travel short distances or not use it as much as they would like to (P11: 264-268). On the other hand, P9 and P5 observed that during the pandemic, the supply not only of bicycles but also of components in the bicycle shops has dropped (P9: 157-167; P5: 414-420).

The low affordability especially affects persons who work on their bicycles and economically depend on cycling. P10 experienced the extreme case that her bicycle got destroyed when a taxi driver ran over it (see 5.2.3), but since she works as a bicycle courier her income depends on having a bicycle – the income that she needed in order to buy herself a new bicycle to continue working (P10: 27-32). Only due to the support from her community she could solve this problem, but for P6 who also works as a bicycle courier it is a huge issue: In a short chat about 2 months after the interview, she reported that her bottom bracket broke and that she can neither afford to repair it, nor to buy herself a new bicycle. At the moment of writing this, she found herself in severe financial problems due to not being able to work as much as before, without having any prospect of a solution (P6: 488-525).

“No, I didn't get [a bicycle], it's difficult. I cannot buy it. I do not have the money. So for now I'm walking or running to deliver sooner. But I make fewer deliveries this way, so I am in a complicated situation. I was happy with Rappi because if you work every day, you collect money. But if you are late with an order, they block your account and do not let you work for several days. [...] This month I have collected very little and I cannot pay my rent anymore, so I am in a very complicated situation.” (P6: 513-525)

In summary, bicycles are not an accessible good in Argentina. Taking into account that the sample is dominated by the middle class, it can be assumed that for lower social strata with even less economic resources, purchasing a bicycle might seem completely out of reach which also makes it a problem of social class (see 5.2.7).

5.2.5 Times and Occasions

All the women reported temporal or occasional differences in their disposition to cycle. During the week, some of the participants saw the bicycle more eligible on the weekends than on weekdays – not only because of the more recreational use that they associated to the bicycle, but, as P1 and P8 mentioned, also because of the calmer traffic situation on these days that facilitates cycling (P1: 63; P8: 128). While this might be related to the level of cycling experience, the differences in the willingness to cycle at day and at night were common in all the participant's subgroups. Among the frequent cyclists, the elderly ones (P3, P6 and P9) all reported that they do not cycle at night or at least try to avoid it (see 5.2.7) – not only because they found it harder to see at night and thus felt less safe (P3: 233; P6: 131-132), but mainly because of worries about their personal security (P3: 129-130; P6: 131-132; P9: 95-104; see 5.2.8). The latter was also the principal reason for the infrequent users that all stated that they would not cycle at night (i.a. P1: 62-63; P8: 283-286).

“When I finish work, there are days when I finish at 8 p.m. and then I come back by bicycle. But not later, I would not feel very comfortable at night because I am alone on a bicycle, I leave work and come back alone.” (P3: 129-131)

² Ibid.

On the other hand, the younger women among the frequent cyclists all do cycle at night - P7 even commented that she prefers it over cycling during the day because the streets are less busy and there is less noise (P7: 157-160). Anyway, they are also aware of the security issue at night, but it seemed like it did not impact on them too much (i.a. P4: 90-92).

Above these differences of day- and nighttime, the women noted some occasional circumstances that might impede cycling for them. Mostly they referred to climatic conditions, like rainy and cold days in winter (P3: 131-132; P4: 143-144) - or to weather events as in case of P9, who recently had suffered an accident in a storm (P9: 94-95). Others mentioned that some days they are just not in the mood for cycling, whether for being tired and without enough energy due to workload implied by care work (P11: 261-262), due to the changes according to her menstrual cycle (P7: 244-250), or due to difficult times or phases in the personal life (P10: 203-207).

5.2.6 Abilities

A lack of certain abilities and skills in the context of cycling might imply another important barrier for women to use the bicycle. Certainly, first of all they need to know how to cycle. Almost all of the interviewed women learned cycling as a child, only P7 did not know until lately and learned it during the pandemic. She related that she felt embarrassed for a long time for not knowing how to ride a bicycle as an adult and was afraid of it (P7: 3-6; see 5.2.10), but that she recently discovered, in groups in social media and among her friends, that there are many people in the same situation, who would like to ride a bicycle but never learned and are too afraid of it (P7: 189-192/286-288). According to her, the increasing presence of cycling and cyclists in the city, works as a stimulation for those people to actively find a way to learn it (P7: 183-185). Anyway, among her personal motivators there was also the pandemic that created the desire and the need for another transportation but apparently also created better conditions for learning to cycle (see 5.2.12):

"It was something I wanted to do for a long time. And with the pandemic even more because of the impossibility of using public transportation, and also because it is something super revolutionary, super free, the bicycle. So I said, it's time, it's now, because the streets were lonely too. Last year I set myself the goal to ride a bike and I did it, I achieved it." (P7: 10-13)

Previously to the pandemic she has had help from her sister and her ex-boyfriend who taught her (P7: 55-58), but during the lockdown she was learning by herself although she would have liked to join a group for some support (P7: 345-347). The difficulties she had to face at the beginning, were balancing herself and coordinating her movements, and losing the fear of the height of the bicycle and of the deficiencies of the cycle paths (P7: 302/62/254). She commented that she used to cycle very slow when she started and still takes many precautions and prefers to avoid confusing and crowded situations (P7: 325-334). Hence, learning cycling and starting to cycle actively as an adult is not only difficult from the emotional/psychological point of view, but also from a physical and traffic-related one - and the overall conditions for cycling in Buenos Aires (see 5.2.2 and 5.2.3) might not facilitate this process. Although it is hard to estimate the actual number of persons that does not know riding a bicycle as an adult, there could be a certain probability that this obstacle might concern more women than men (see 5.2.7) and that this group is growing due to the decreasing affordability of (children's) bicycles (see 5.2.4).

The second ability that is important for cycling and that the interviewees alluded to, is the knowledge on how to cycle safely in the city traffic - in some way also distinguishing the skills for transport cycling from merely recreational cycling. As mentioned earlier, cycling in the city,

especially on streets and avenues without cycle paths, often seems to be connected to fear and feeling unsafe - and one of the possible reasons is that cyclists are not aware of the things they are doing “wrong” or the measures they could take in order increase the (sensation of) safety. P7 gave the example of a situation where she collided with another cyclist because “it did not come to her mind” to look back to see if there was someone behind her before turning left (P7: 82-85). It can be assumed that also other moves, like indicating by hand signal before turning etc., would not necessarily come to one’s mind if a person never learned about these measures. Especially the infrequent cyclists among the women indicated that they are either currently lacking knowledge of how to move and behave in the city traffic (i.a. P8: 73-74), or that they once received guidance by a more experienced cyclist who gave them hints and recommendations (P1: 244-246; P2: 242-244) (see 5.2.7). Also P4 related that she acquired many of the skills she has today from her ex-boyfriend:

“I learned a lot of things with him there. With him I learned [...] not to be afraid to cycle on an avenue, how to be attentive, to understand the speeds of the different streets.” (P4: 85-87)

In this context, P8 reported that she also did not know how to behave when cycling together with her son, whether to go behind or in front of him, and how to take care of him (P8: 78-88; see 5.2.9). She got help because she asked her question in social media and got recommendations from other parents. Anyway, persons who do not have an experienced cyclist guiding them and who do not actively search for recommendations, do not automatically acquire the necessary skills for safely cycling in traffic.

Hence, more proactive cycling- and traffic education might be worthwhile to communicate knowledge that can increase the perceived and actual traffic safety - and thus reduce an important barrier in cycling. Indeed, this was a topic that repeatedly came up throughout the interviews since the participants perceived a lack of traffic and cycling education – not only among cyclists. Especially P1, P4 and P5 emphasized that the other road users, like drivers, pedestrians and motorcyclists, usually do not seem to not have an understanding of how it is and what it means to cycle - what, according to them, causes unsafe situations and accidents, especially when combined with a lack of mutual respect and caution (P1: 229-232; P4: 287-290; P5: 351-356; see 5.2.3). P4 also wondered whether it was a topic that is discussed in driving school, for example to sensitize car drivers to keep enough distance when passing a cyclist (P4: 307-309).

Apparently, traffic education or cycling education in particular, do not play a major role for instance in school. The image of cycling as a rather recreative activity and not a proper mode of transport (see 5.2.7) does naturally not entail that it is considered necessary to educate people about how to cycle safely. As P8 related, her son of 10 obtained only very basic traffic education – like how to behave as a pedestrian, what the traffic lights mean, how to cross a street etc. – and never learned anything about urban cycling and safety measures for cyclists (P8: 90-94). But as the parents probably also never had a more profound education on this topic that they could pass on to their children, this might end up being a problem: Apparently, only few, frequent cyclist have this awareness and this knowledge – and for instance P9 and P10 remarked that it made cycling less safe, having to share the cycle paths and roads with more cyclists, and especially with new cyclists who “do not respect the issues of cycling in the city” (P9: 115) – since “there is no cyclist more dangerous than the one who does not know how to ride” (P10: 315). Anyhow, traffic education with a focus on cycling can directly increase the knowledge and skills needed for cycling and thus might impact indirectly on the traffic behavior, the perceived traffic safety and, on a long run, even on the mobility culture as well as on gender biases in cycling.

The third set of skills and knowledge that could make cycling more accessible for women is the know-how about maintenance and basic bicycle mechanics. Having to ask another person to fix

simple defects like a flat tire, might imply higher costs, a longer time span until one can recover the bicycle, as well as the sensation of dependence:

"At the time I was dating my ex, and as I did not know anything about bicycles [...] it was really annoying to be asking him everything. I felt like I was really annoying and in the bike shops I also felt like they were bullshitting me - so I came to this [Facebook] group trying to learn a little bit about the minimum you need to know on the bike. Or even the words to say in the bike shop - instead of 'I do not know what it has' - 'well, it has this'." (P4: 380-384)

Knowing about basic bicycle maintenance thus can be an empowering skill for the women and help them in their everyday life on the bicycle. On the other hand, in case of P10, her advanced skills of bicycle mechanics helped her to resolve her problematic situation after her accident with the taxi, since she was able to reassemble a bike with given bicycle parts from scratch (P10: 28-31).

5.2.7 Socio-cultural Setting

The socio-cultural dimension incorporates many different factors that in some ways are related to how the interviewee, her circle of acquaintances, her social group or the whole society perceive and reflect on the topics of gender, mobility/traffic, and cycling - as well as how these topics, for their part, retroact on her and society. Hence, this dimension might seem rather incoherent and a hotchpotch of topics, particularly as there are often no clear boundaries between the socio-cultural and the other dimensions. Anyway, due to its relevance, this dimension needs to be made explicit as it gathers various relevant aspects.

Mobility Culture

The mobility culture concerns the general notion or attitude in society regarding mobility and cycling in particular. Thus, it goes beyond personal opinions and individual perspectives but tries to capture the common understandings towards these topics. Getting an idea of the mobility culture in Buenos Aires helps to comprehend the social norms that underlie all decisions and mark the framework of possible action.

In this context it is interesting to look at what is perceived as 'normal' and what, in turn, as somehow divergent from the standard. The image of the 'normal' is collectively constructed and relates much to the current and past common practices and what people are used to. Since cycling is a relatively new and until recently very rare practice in Buenos Aires, it seems like it has not reached 'normality' in most of the society yet. P6 for instance mentioned that she always took the public transport to go to her office in downtown "normal, like everyone else" (like if it was an unnecessary question to ask) (P6: 151), while P9 declared herself "rather particular" for abandoning her car and choosing cycling and other modes instead (P9: 80). P11 experienced that her decision to use the bicycle with her daughters and especially her decision to buy a cargo-bike were not seen as 'normal' - many people were skeptically questioning this investment and did not understand the importance for her mobility (P11: 357-362). Furthermore, many of the participants perceived that the recreative notion of cycling still dominates the public opinion and that it is not treated like a proper mode of transport, or even like a medium some people work and gain their money with (P1: 213; P4: 204-206/228-229).

"You go on the bicycle for a ride when you're a kid with your dad on the weekend, and then when you're older to exercise [...], but really to get around it's not a common denominator for people." (P1: 213-217)

As a consequence, for instance P4 argued that there is not enough visibility of cycling in the city and that not only other road users, but also the city's government are lacking insights and experiences about the necessities of cyclists (P4: 202-212; 5.2.2 and 5.2.3). P8 even remarks that cyclists and cycle paths commonly are seen as a problem – at least until people get onto the bicycle themselves (P8: 231-247). Thus, the notion of cycling seems rather negative, mainly because the problem consists in bicycles taking spaces that previously belonged to cars. P2 describes the situation from her perspective as a car driver:

"As a driver, the truth is that the cycle paths make the road a lot smaller, so it's also something you say - everything is full of cycle paths and we all have cars - and the cycle path ends up disturbing a bit the journey." (P2: 314-316)

This does not only mean that there is a concrete competence for public space between the two modes, but it also implies a certain way of thinking regarding mobility options. There seems to be a rather clear concept of a hierarchy of transport modes with the motorized vehicles at the top (busses, taxis, car). Compared to bicycles they are not only above them regarding the physical conditions of speed, power and protection, but they also seem to be treated with priority in many aspects – whether in the public discourse, whether concerning the infrastructure, the traffic behavior (i.a. P5: 330-338/440-446), or traffic policing (P4: 218-222).

On the other hand, mobility culture in Buenos Aires seems to be in the process of being overthrown – accelerated by the pandemic but already showing certain tendencies before. All the participants perceived that cycling is gaining importance, becoming more visible and thus more generally accepted (i.a. P9: 151-157; P11: 354-356), what might motivate more women to cycle as well since suddenly it appears to be a mobility option and not only a fun activity on the weekend.

"We are becoming more and more women and we are becoming more and more bicycles - so step by step something is being done." [...] "I wanted to highlight the growth of the bicycle here in Argentina, in Buenos Aires in particular, many people are moving around by bicycle, they are going to work, to school or wherever by bicycle." (P10: 151-152/417-419)

Anyway, the mobility culture varies among the different social groups since it is probable that there are distinctions for instance according to age and social class (see below), but also to ethnicity etc. Furthermore, the unequal distribution of cycling infrastructure, and thus the gaps of visibility, might impact the normalization of cycling in some parts of the city (see 5.2.2).

Social group

As argued previously, behaviors that are seen as “normal” might become a habit for more people (see above). Anyway, what is seen as “normal” does not only depend on general tendencies and developments, but also on the personal environment, corresponding to what Bourdieu calls the habitus (see 2.2.1). Hence, it might be insightful to look at how personal contacts and their attitudes and habits influence the behavior of (potential) cyclists. There seemed to be a tendency that the women behaved similar to their social surrounding – so that participants who cycle frequently also tended to have more friends and acquaintances who actively cycle for their transportation: For instance, P3 commented that several of her (women) colleagues commute by bicycle (P3: 157), and P4 said that all of her girlfriends cycle and that it is very common among them to go anywhere by bicycle (P4: 392-396). On the other hand, for example P1, P2 and P8, all of them infrequent or non-cyclists, mentioned that none of their girlfriends (or colleagues) cycles, neither for

transportation, nor much for recreation (P1: 129-131; P2: 341-344; P8: 334-336). It can be supposed that a behavior is more likely to be considered suitable for oneself when there are other persons in the direct surrounding that act the same way. P7 comments that for her cycling seems to be comparable to a trend that with higher visibility becomes more familiar and tangible:

“The good thing is that people also tend to repeat what others do, it is like a fashion. And now, as you can see more of this, people are becoming more animated.” (P7: 184-185)

In case of cycling, this might not necessarily impact the whole mobility behavior of a person but might as well only apply to certain trips. For P4, one of the reasons to use the bicycle for the trips to her previous workplace, was that some of her colleagues also cycled and that they could go some part of the way together – what was not only an act of social connection but actually came with the advantage of feeling more secure on the way back home as well (P4: 26-30; see also 5.2.8). Anyway, one’s image of cycling is also affected by concrete experiences that friends and acquaintances gained when cycling (see 5.2.3). Probably it is mostly negative experiences that are shared and that reaffirm the perception one might already have as a non- or infrequent user: P5 commented that some of her cycling friends suffered severe accidents in traffic what has shaped and defined her image of cycling for a long time (P5: 358-364). P12 mentioned her son’s accident as a justification for considering cycling unsafe (P12: 89-90). Still, this probably has less of an impact on frequent users – who also reported negative stories from their surroundings – but who have the possibility to balance this information with their own (positive) experiences. In a similar way, women who do cycle frequently are confronted with the reactions they get from their surrounding regarding their bicycle usage: some very positive, like P10’s family who appreciates and completely supports her business (P10: 257-259), or like the persons that stop P11 on the street to ask her about her cargo bike, give her compliments, or take photos of her (P11: 354-356/312-313) – others rather negative or at least skeptical, like some of the comments P11 got from closer acquaintances, questioning her decision to buy and use the cargo bike (P11: 357-362), or like P6 who reported that some of her friends could not believe and understand that she started to work as a bicycle courier and that she actually likes it (P6: 384-397).

As it is discussed below, family members might have an influence, since this context shapes the first image one has of cycling. As P3 and P9 commented, the bicycle has been very popular in their families what made that they and their siblings grew up incorporating cycling into their everyday life and are cycling up to the present day (P3: 88-91; P9: 253-265). P5 on the other hand mentioned that cycling never has been a common activity in her family, not even for recreational trips (P5: 160-167). It costed her some effort to see the bicycle as a mode of transport for herself and only later in her life she found other role models in persons that surrounded her (P5: 51-54). Indeed, role models – mostly very active and experienced urban cyclists – seem to play an important role in many aspects: They do not only form the women’s image of and attitude towards cycling and are a crucial motivator, but they can also support and advise them regarding any practical issues. Interestingly, for the participants who mentioned such a key person, it was usually a man who took this function, and especially male (ex-) partners who motivated and supported them when starting to cycle: P1 commented that the few times she cycled in Buenos Aires, it was always with her ex-boyfriend as he used to be a very frequent cyclist and convinced her to do trips by bicycle together, what also gave her more confidence and carefreeness regarding safety (P1: 239-246). In case of P4, her ex-partner made her take the step from mere recreational to utility cycling and passed much of his cycling knowledge and skills on to her (P4: 80-95/337-345; see 5.2.4). P7’s ex-boyfriend created the conditions for her to learn riding a bicycle by giving her a bicycle as a gift and by starting to practice cycling with her, and also her current boyfriend, who is a passionate cyclist, supports her

practically (P7: 43-44/55-56/281-286). P10 already was a frequent cyclist when she got to know her current partner, but also commented that he encouraged her to continue and get more involved with cycling (P10: 210-228). As mentioned before, in case of P3 it was her father and for P2 and P5 a cycle-enthusiastic friend (in both cases the same person) who generally motivated them or gave them practical advice (P2: 240-247; P5: 53-54). Thus, role models or other motivating and supporting cyclists – whether men or women – can have a great impact on the personal bicycle usage. That it was mostly male persons in case of the interviewees, probably just reflects the current state regarding the gender-disparities in cycling participation.

Anyway, the lack of women as role models can also be a barrier. Contrasting the previous assumption that male cyclists function well as motivators and mentors for women who start cycling, some of the interviewees insinuated that they could not entirely identify with the male cyclists that surround them: For instance, when talking about her male acquaintances that "do everything on bicycle" (P8: 342), P8 apparently perceives them as rather extreme since they cycle in any kind of situation – according to her, also because they *can* cycle in any kind of situation (as for example at night) due to being male (P8: 342-359). She does not seem to see them as an example to follow or one she could relate to, but she practically distances herself from them in the way she frames their behavior. Also P3 does not seem to completely identify with male cyclists and perceives certain mismatches. She commented that she sees many groups of male cyclists that get together on the weekends, well equipped, to do long bicycle tours – "but they are all men" (P3: 109-112), and as she says, "I don't know of any women's groups that do that" (P3: 285). Apparently, she does not feel like this could be an activity for her or that she could be part of such a group. Hence, it seems important to increase the presence of women as role models, to make women cyclists more visible in everyday life, and to see and get to know women who also show these behaviors – who also do everything on their bicycle or who also go on long bicycle tours with a group. Having role models the women can relate to and identify with, facilitates them to see themselves in this role and to consider the bicycle an option for their personal mobility. Inversely, the frequent cyclists among the interviewees already function as role models within their social group: Especially P7 tries to motivate her girlfriends to start cycling and helps them to overcome their worries and prejudices – in particular because she has been in a similar situation as some of them until recently, when she did not know riding a bicycle herself, making her be the embodiment of this opportunity as well as making her more understanding and empathetic for the problems and hesitations of other beginners (P7: 286-310/185-194). P11 with her cargo-bike is a role model especially for other parents, not only due to the public attention she gets, but also among the parents of her children's school where she inspired at least one family to abandon their car (P11: 340-348).

Social class

In the literature, the social class was mentioned as one of the factors that intersects with gender and influences mobility decisions and the attitude towards cycling. Although the sample is dominated by the middle class, it is possible to distinguish nuances among the different participants regarding education, occupation or (probable) income, that give a starting point to analyze the impact of social class on the cycling behavior. First, there are differences in the mobility options between which the women can choose: P1, P2 and P9, all with academic background and probably middle-high incomes, own a car (in case of P9 owned in the past before deciding to abandon it) that they have/had at their disposal for all their trips and that reflects a certain economic status.

The bicycle is only one option of many and the decision to cycle or not is rather based on personal preferences, commodities, and other motivations or barriers. The statement of P2 – “it’s all full of bike paths and we all have cars” (P2: 315) – that has been quoted previously (see above), might not reflect what she actually thinks about the topic, but it shows a certain way of reasoning connected to her direct social reality – that probably includes mainly other similar ones, and not too many opposite realities. Or to put it in other words, only a person who can afford to have a car might utter this type of notion. – On the other end of the spectrum, there are P10 and P6, both working as cycle couriers and financially depending on their bicycles. For them, cycling is not only a mode of transport, but an economic necessity to persist - not having a functioning bicycle, experiencing an accident, or finding hostile traffic conditions are not only inconveniences, but threaten their livelihood (see 5.2.4). In between those two poles, there are all the other participants’ situations, each differing from the others: P11 has her partner’s car at her disposal and could afford to buy her relatively expensive cargo-bike, but made this investment considering that the financial burden of public transport was too high for her. P5 and P8 both have an academic background as well, and from time to time afford to use a taxi or Uber, but mainly depend on public transport and can only hardly afford buying themselves a bicycle.

This leads to the next point: As argued previously (see 5.2.4), cycling becomes a matter of social class as it requires certain economic capacities. If not even P5 or P8 with their above-average incomes can afford to buy a bicycle – how about women from lower social strata with less income?³ Large groups of society cannot afford to buy a bicycle, but also if already owning one, it needs to be maintained and repaired, what according to P11 is also not affordable for some of her friends (P11: 264-268). Furthermore – considering that the loss of a bicycle thus would be more severe for people with limited economic possibilities – secure bicycle parking becomes an issue (see 5.2.2): garages imply extra expenses, and (especially in lower social strata) the housing situation might be too cramped to store a bicycle inside. This was something that P8 insinuated (P8: 173-176), but that might at least also apply for P12 who lives with her family in a *hotel familiar* (P12: 4) – a relatively precarious housing situation where a family lives in one room and shares facilities with other families.

Above that, some of the women were quite concerned about the matter of social class and shared some of their observations regarding the problematic. P8 for example noted that in many poorer neighborhoods, especially in the metropolitan area of Buenos Aires, people depended on cycling for their transportation since there are no good bus connections and other modes are too expensive. P4 remarked, as mentioned earlier (see 5.2.2), that the distribution of cycle paths mainly favors the neighborhoods of the higher middle class and thus concludes that sometimes it seemed to her that the cycling policies in Buenos Aires were “all a policy for the posh/snobs [orig.: chetos]” (P4: 257). Since cycling infrastructure is more common and concentrated in these specific areas of the city, there might be a certain risk that cycling obtains the image of a mode of transport of the middle-higher strata of society – and depending on whether one belongs to this group or not, one might consider cycling as appropriate for oneself or not. Anyway, as P5 and P11 made clear, certain images of social class connected to cycling already exist. P5 for instance contemplated about the intersection of gender and social class and commented that she associated cycling mainly to young, academic, and independent women with a wage employment, while when thinking about the

³ P5 mentioned to earn 45.000 ARS per month (P5: 409-410); P8 80.000 ARS (P8: 41). The Argentinian average income per capita was 25.284 ARS in the first trimester of 2021 (INDEC 2021b: 4), while in the low social strata the average per capita was only 8.675 ARS (ibid.: 5). Furthermore, a look on the gender distribution within the different social strata shows that women dominate the lower strata, while the share of men is larger in the higher strata (ibid.: 8).

popular classes it is mainly men and boys who are cycling (P5: 373-387/510-520). P11 on the other hand, experienced very contrary reactions to her cargo-bike from different social strata. As she remarked, in the popular neighborhoods she received a lot of recognition and support, especially from women and other mothers who appreciated the bicycle and this way of travelling with children (P11: 311-314). In turn, when cycling in “neighborhoods more top” (P11: 319-320) she heard comments like “Where do you think you are – in Miami?” (P11: 320), insinuating that this bicycle was inappropriate for her as a “poor hippie [orig.: hippie sin OSDE]” (P11: 327-328) and for the city of Buenos Aires, but also that apparently the persons perceived that she felt like something better than other people (317-335). In contrast to this, other parents from her daughters’ Waldorf School, so people more “progressive and elitist” (P11: 342-343) as she describes them, appreciated the cargo-bike, and even took her as an example to follow (P11: 341-348).

All in all, the intersection of gender and social class in mobility and cycling is too broad to be discussed completely at this point, particularly since it was not the main aim of the research. Anyway, both the opportunities as well as the images that are connected to the different social classes regarding the bicycle, directly or indirectly impact on whether someone might consider cycling or not.

Age

The age was mentioned and observed to be another important intersecting factor for the decision to cycle or not. Some of the women not only shared their perceptions regarding this topic, but also talked about their personal development regarding cycling over their lifetime. As mentioned earlier (see 5.2.6), most of the women learned cycling as a child. Anyway, that does not imply that they cycled throughout their whole life, as P3 and P9 did for instance (P3: 79-81; P9: 204-207). Some of the women showed a very similar pattern regarding their bicycle usage that corresponds to the “start-stop-start” experience that Bonham/Wilson (2012) described: They learned it when they were young and used it during their childhood, at some point, usually in their adolescence or early adulthood, stopped cycling because of different motives, and in some cases started again at later moments in their life (P5: 34-36/167-177/241-242; P6: 93-96, P8: 22-23/196, P12: 46-49). The reasons for them to stop were diverse (not owning a fitting bicycle anymore, moving to another city, not feeling comfortable anymore when cycling), but at least P5 also assumed an influence of gender. As she remembered, during her high school time it was very common to cycle in the afternoon or during breaks – but only among her male classmates while the girls never cycled (P5: 182-186). Hence, it seems like gender differences in cycling do not really exist in the very young ages, and that parents do not necessarily exclude girls from learning to ride a bicycle – but it seems like the differences start to emerge rather in the adolescence. P5 mentioned that at that age she started to develop a certain understanding:

“Indirectly you know and learn very quickly that there is something about the street, that there is something about public space, [...] that there is something about living in this city that is hegemonically masculine, hostile to women.” (P5: 190-195)

This understanding might be induced mainly by family members or other acquaintances, but maybe also comes along with first personal experiences of sexual harassment (see 5.2.8), that for instance for P5 started at the early age of 10 (P5: 198-199).

Independently of specific security issues, P2 remarked a similar thought, that she as a mother might pass on her point of view regarding cycling to her children and thus transmit a certain idea about

cycling from generation to generation (P2: 399-406). That this actually can happen, might be shown by the case of P3 whose father was a passionate cyclist and left his family with the same attitude (P3: 88-91; see also above). Anyway, P9 comments that she sees a lot of differences between younger cyclists and cyclists of her age, also between her daughter and herself. She perceives that habits and attitudes are changing from generation to generation. According to her, cycling became very popular and common among younger women - but women at her age are struggling to start cycling since they first still have a rather recreative notion of cycling, and second are more likely to be afraid of the traffic or of cycling at night (P9: 239-246; 278-285). P8 seemed to perceive more of an actual age difference and less of a generational one: She insinuated that cycling might be more suitable for younger women – or at least she seemed to associate cycling more to younger women. She did so not only because the only cycling women she knows is younger than her and 27 years old (P8: 334-335), but also because she associated it more to her past self than to her present self. By saying “I really liked to take the bike, go, and ride alone – but I was 20 years old as well” (P8: 196-197) she directly emphasized the connection between her age and her attitude towards cycling. Elsewhere she argues that today she does not go out to cycle with her friends “maybe because of age – maybe younger girls do” (P8: 145-146). – On the other hand, contradicting this perception, there are not only the interviewees that are older than P8 and who are frequent cyclists, but also P6 who deplors that there are many prejudices regarding her age and her work as a bicycle courier, since this job “is not just for a 20-year-old” (P6: 78-79) but also for people like her, a woman at advanced age.

Gender Roles and Biases

The factor of gender roles and biases is hard to grasp - first, since it is the underlying problematic of the whole research and second, since it forms part of any of the other factors. Nevertheless, some specific gender roles and biases in mobility, traffic and cycling stand out and should be contemplated and assembled separately, since they are an influencing factor by themselves which is not yet sufficiently discussed under the other aspects. Although this might lead to some repetition and redundancy regarding other chapters, it is helpful for the analysis to summarize these points and get to the heart of this factor.

Some of the participants – for being women – did not feel like the city and the public space belonged to them in the same way it does to men. Some of the women mentioned that they do not feel like having the same possibilities as men to use and appropriate the urban space (i.a. P5: 194-196; P8: 355-373). According to them, the machismo and the gendered power hierarchies in society also manifest themselves in the public sphere, for instance by sexual harassment in all its forms or sexist comments (i.a. P4: 417-418; see 5.2.8). On the other hand, common gender-specific, prudent behaviors and precautions are being mirrored and passed on from women to women and generation to generation – what P8 describes as a way to “survive” (P8: 115-117). The consequence is that the women feel less comfortable and secure, and that they feel restricted in what they can do in the public space – whether it is wearing a dress, going home alone at night, or freely choosing the way of transporting themselves. Some of the women, like P4 and P5, expressed and contextualized this impression quite directly, but also others like P2, P3 or P8 remarked the same sensation of not having equal opportunities, and of not perceiving and using the city in the same way as men. For instance, P8 describes that the mere condition of being a woman changes one’s perception and behavior:

"[Men] feel safer, [...] the sensation is that we are not as protected at 5 a.m. [...] Among women, [...] here it is very common when you get into a taxi, a friend says goodbye to you, [...] you tell her to let me know when you arrive, you take the license plate number of the taxi, or you share the location in Uber. Let's say, there is a register all the time that the other one may not arrive at home. And it is not objective, you are not thinking about where you are, or how old you are, or if you are drunk or not, or your condition. It is always, regardless of the circumstances." (P8: 355-373)

As the women tend to perceive the city and public space differently from men and often feel limited in their opportunities - mostly connected to a feeling of insecurity – they also take another position in public life and traffic: P8 for example feels that she as a woman always is in a “situation of inferiority” compared to men for the mentioned reasons (P8: 61). The origin of this disparity can be seen in the gendered power structures and common gender roles that characterize the society and the everyday life – and that also impact on women’s mode choice, mobility or traffic-related behavior. Thus, the perceived imbalance of opportunities, as mentioned above, makes women take other decisions regarding their mobility: For instance, it makes them avoid cycling or walking (not only) at night (see 5.2.5) and makes them prefer other modes of transport where they do not feel as exposed and vulnerable (see 5.2.8).

Furthermore, indicators of the male dominance also show in concrete situations in traffic where some men actively exercise their power towards women or where certain prejudices become visible. Hence, some of the women felt that they usually were treated differently from male road users: P4 remarked this sensation regarding a personal experience, that has been mentioned earlier as well (see 5.2.3), where a male car driver cut her way and blocked the cycle path. When confronting him, he got very aggressive, shouting at her, and telling her to “suck his dick” – what made her question, as she said, whether he would have reacted the same way if she was a man (P4: 369). P10 perceives the matter in a very similar way but formulates it more universal:

"They will always respect the man more than the woman. A woman is very vulnerable in the city of Buenos Aires. One already on a bicycle is very vulnerable, and a woman on her own is vulnerable. So, a woman on a bicycle in the city of Buenos Aires is very little respected, is very prejudiced, is very badly treated as well." (P10: 146-150)

Here, P10 is giving an explanation for the fact that women apparently tend to have a less pleasant experience when cycling. So, in case of P4 it was not only the circumstance of her being a cyclist that made the car driver get aggressive but also her trait of being a woman. Two different power systems overlap at this point – first the hierarchies of gender and second the hierarchies of traffic (see above) – that create a specific women cyclists’ experience. Anyway, also P2 and P5 saw strong connections between the social dominance of men and the hierarchies in traffic. Both of them mentioned a very similar situation, that when they were cycling, men have accosted them to offer them a ride in their car:

"'since your boyfriend didn't buy you a car, I'll drive you, look what a nice car I have' - I don't know, things like that." (P2: 75-76)

"that they say 'oh how beautiful you look', I don't know, 'get off the bike, I'll take you by car'." (P5: 223)

That calls attention in many ways. First, the drivers used the mere circumstance that their car was facing a bicycle as a means to get in touch with the women and harass them (see 5.2.8). Second, they apparently presumed that in the car they were in a better position than the cyclist, that they could brag, or that they had something more attractive to offer to them – what again shows the perception that the car is superior to the bicycle and that the bicycle is not a proper transport mode.

Third, they did not treat them at eye level, not only for being a cyclist, but also for being a woman – insinuating that they only were using the bicycle because they were depending on a male person either to give them a ride, or to buy them a car – as if a woman was not able to do any of that by herself. And again, the sexism and the mobility culture interact and create the specific experience of women cyclists.

Above that it becomes visible that the car and anything related to traffic, is quite strongly connected to the image of masculinity. For instance, P5 noted, probably from personal experience, that in middle class families, young men were more likely to be supported by their parents to buy a car than young women (P5: 455-460). According to her, women on the other hand are generally considered incapable of driving or handling traffic (see quote below) – which also is attested by P2 who relates that she hears comments regarding her driving qualities from men when going by car (P2: 79-81):

"There is not a day that goes by that you don't see a man shouting to a woman 'you had to be a woman, you're a fool driving'. [...] I believe that we are still considered disabled or with less qualities to walk, to drive, to ride a bike, for everything that has to do with mobility." (P5: 477-482)

Regarding cycling, as mentioned above, P5 previously had rather clear images of cycling that made her associate it rather to boys and men. According to her, there is also an image of women's debility and the image that women were not as "prepared for scratches and for falls" as men and thus not adapted to cycling (P5: 483-484). Concerning the latter point, it is interesting that P10 argues in a similar way when relating that sometimes she feels "inhibited" and more prone to be slower or with less reflexes compared to a man – but she emphasizes that this is due to the physical and anatomical differences and not a question of prejudices or biases (P10: 140-146).

Hence, seemingly men tend to predominate the social interaction in traffic and in public space in general, making women feel inferior, mistreated or overlooked and giving them the sensation of being less capable. At least this is how many women might perceive their situation in the street from time to time – what naturally does not make cycling a very appealing mode of transport, since it implies to actively take part in traffic and thus to be confronted with inconsiderate persons and uncomfortable situations in which they must assert themselves as a cyclist and a woman over and over again. P7 supports this observation by arguing that more equality in general levels the mental barriers to certain activities:

"Women are a little more independent [in Buenos Aires compared to Colombia], there is more equality and that mentally allows you, it also awakens your activities. It is as if you can unfold." (P7: 181-183)

On the other hand, contrasting the previous perspective and reversing the logic, P5 perceives the bicycle as a transport mode for women's empowerment as well. She explains that it can be a tool "to appropriate the streets, to occupy the public space" and thus to withdraw some of the male predominance in traffic and urban space (P5: 464-466) – precisely by being present and asserting oneself in these spaces. Furthermore, she argues that the empowerment is connected to the bicycle giving her the sensation of independence and autonomy, of being free to choose when, how and on which route to travel, without having to rely on public transport or other people (P5: 466-468).

Esthetic Factors

The esthetic factor concerns the interrelation of cycling and appearance, the way in which cycling influences the women's looks, and on the other hand, how certain expectations in society and gendered dress codes might impact their choice to cycle. Above that, since usually there tends to be more social pressure on women concerning their appearance, this factor might be gender specific, or at least one with a greater impact on women than on men.

Among most of the women, cycling seemed not to be perceived as very compatible with dressing up for formal occasions or work. Two of the infrequent cyclists, P2 and P5, both commented that the bicycle does not suit their daily commute due to the existing expectations regarding their appearance at their (previous and current) workplaces. P5 explained that at most offices there is a lot of conservatism, demanding dress pants and high-heeled sandals, which apparently does not fit into her image of cycling (P5: 57-62). Also for other more formal appointments, she prefers public transport to arrive without sweating and messy hair (P5: 134-136). P2 on the other hand, put more emphasis on the fact that she might sweat on her way to work, and the complication it implies to have to fresh up and change at her office – also because her workplace does not offer a comfortable space for doing so:

"It is more than 8 km to get to my work and I should go dressed in a certain way and then get to the office and be able to at least fresh up a bit and change. Well, we do not have this space in the workplaces, so I could not go by bicycle for this reason - nor in winter [...]. The streets are not in good conditions, if there is water and other things, you get quite dirty and when one goes to work it is a factor that also weighs a lot. So, everything that this movement implies, having to wear other clothes [...] is very hard work for me." (P2: 24-31)

P7 remarked a similar objection in case of working in an office but found this aspect less important in her case as she is an informal worker (P7: 107-112). Although P3 does use the bicycle for commuting, she pointed out the importance of arriving "good and not sweaty" as a teacher, as well (P3: 48). In contrast, P9 commented that she never saw this aspect as a barrier since she did not consider it a problem to take along a t-shirt and shoes to change at the office (P9: 491-506).

Furthermore, cycling did not seem to be associated much to looking "feminine" (P4: 404-411) or "pretty" (P10: 113-115). Both P4 and P10 explained themselves and their predilection for cycling by not considering themselves neither very feminine in their looks nor very interested in putting themselves pretty (ibid.). P4 and P7 sustained this argument by contrasting it with the inverted situation: According to their perception, women who like to dress up, use skirts, dresses, make-up or high-heeled shoes, are less likely to be enthusiastic about cycling (P4: 407-409); although P7 does not perceive this dressing style very common in Buenos Aires compared to her experience from Colombia (P7: 153-156). Nevertheless, the same P7 is also a good example to prove the opposite. She said that she likes to dress up for going out at night or for a date but does not want to limit herself in cycling and thus tries to find a way to combine both (P7: 115-118).

On the other hand, the perception of not being able to dress up the way they want when cycling, is also implied by the reactions they get from men in public space (see 5.2.8). Both P4 and P7 noted that they do not feel comfortable wearing a skirt or dress when cycling since "they are going to say things to you" (P7: 100-101) or since "the guys will be trying to see what color the panties are" (P4: 465-466). In this context, it is also interesting to take a step back and have a look at some comments that I received as a reaction to one of my publications in a Facebook group searching for participants for the interviews (see annex). A woman commentator supposed that a reason for many women not to commute by bicycle is that it is uncomfortable to cycle with skirt and high-

heeled shoes and to arrive at work soaked with sweat. – What first of all reiterates what the interviewed women described – but what also made a male person comment: “men like women who are sweaty from exercise”, as if he in turn wanted to reiterate that women’s appearance is something that is constantly evaluated and appraised by other persons, and that women permanently suffer sexism or sexual harassment for their appearance or anything they do. P4 confirmed that by describing a situation of one of her friends who got called “disgusting” by a stranger for not being depilated when lifting her arms waiting with her bicycle at a traffic light (P4: 418-420). Although this can happen in any kind of situation, women might be more in the center of attention when cycling and thus more exposed to this kind of (verbal) attacks.

5.2.8 Security

This chapter outlines the perceptions concerning the personal security of the women regarding any type of assault or harassment, as well as the security regarding bicycle theft. Security was an issue that all women mentioned in some way and that can be seen as one of the principal influencing factors for cycling and a factor that interacts with many of the other ones. Overall, the perception of insecurity usually referred to robberies and was closely related to certain parts or neighborhoods of the city, or to the nighttime, and implied changes in the mobility behavior of some of the participants. Independently of age, social background, or other factors, all of the women were concerned about the topic in general or worried about their personal situation, although it influenced them to varying degrees. Also, it seemed like it is perceived to be generally a rather gender-specific issue – as for instance P3 says: “at night it is not very secure for women” (P3: 286)– like if it was much more insecure for women than for men to be in the street at night. Since it is a general problem and not directly related to cycling, the women always face it when they are in the public sphere, no matter by which mode of transport they are traveling or what they are doing. P12 described how this sensation of insecurity and the fear of robberies and assaults limit her and prevent her from doing the things she would like to do, as it might be cycling:

“Like with all the things that happen, sometimes you are afraid because of the things that happen in the street, that you see the robberies, also that sometimes ugly things happen to you. Sometimes you suppress the things you like to use because these things happen, you see, robberies and all that.” (P12: 90-93)

Anyway, despite of being a universal issue, when walking or cycling the women tend to feel more exposed and vulnerable, and less protected. Thus, some of them explained that they prefer other modes of transport instead – at least at night or in certain neighborhoods. P2 for instance remarks that she feels more comfortable when using her car as she perceives it as a shielded and more protected space that makes her forget worrying about the route or time she is traveling (P2: 82-89). P5 mentioned to prefer the public transport in some cases, since she is not alone and can travel together with other people, and because there are cameras installed that give her the sensation of more security (P5: 211-212).

As described previously (see 5.2.5), especially the infrequent cyclists and elderly of the participants do not cycle at night, mainly because of the preoccupations they have about their security. P9 argues that she knows people who “really had a hard time” due to insecure situations in the street and that she takes extra measures in case she has to cycle during the night, like carrying her valuables at her body and not taking her purse or backpack (P9: 104-108). Among the ones who do cycle, some seemed to have found a more casual attitude towards this kind of perceptions: Especially P4 and P11 both mentioned that they are not afraid that something could happen to them – P11 due

to her spiritual worldview that gives her confidence (P11: 491-493), and P4 due to her self-confidence that she learned and adopted from her ex-boyfriend to confront insecure situations:

"We passed through areas that were not good and he [...] said, well, for the next 10 blocks don't slow down. It doesn't matter what happens, you don't stop. And there were situations... sometimes it was at night and it was a rather dangerous neighborhood or we were afraid. [...] It's like with him I also started to register these things at night - [...] I'm not going to stop at any corner to check if I have a flat tire. I try to make sure there's light, to see who's around" [...] "I was learning to position myself, like I was learning how to stand up to certain situations. With [him] it happened to me many times that they came to rob us. [He] is a very skinny kid who [...] has no chance of scaring anyone. And when they come to rob us, he was standing up and saying 'No'. - 'No, but give me I don't know what' - 'No'. [...] At some point I understood like the logic that no, like if you confront them like that, nothing is going to happen. Then I started acquiring that." (P4: 88-94/338-345)

Anyway, all the participants were aware of the risk for their personal security they might be taking when cycling, and for most of the women it was a reason to not choose cycling in some specific situations. Some of the women, like P1 or P4 for instance, even indicated that they might feel more secure when cycling with male companions (P1: 249; P4: 28-30). That does not only imply that women's security seems to depend on being with a man, but also reflects the common stereotype of the weak woman and the protective and strong man. On the other hand, the image of insecurity itself is rather masculine - P5 describes that one always has to be "with 20 eyes, at the front and back, distrusting" in public space, watching out for men who walk behind one, and looking for women to join and be accomplices (P5: 202-204). Anyway, it shows that the risk perception among women seems to be higher than among men, no matter whether their actual risk is higher or not (P8: 355-359; P2: 370-373).

This may be due to the fact that women are more likely to additionally suffer (verbal and physical) sexual harassment: Especially the younger women highlighted their experiences with sexual harassment and the consequent discomfort and worries about their security. Most of the anecdotes the participants shared were about sexist calls, comments about the physical appearance, or "invitations" as P2 called it, which they got from men when cycling or generally being in the public space (i.a. P2: 368-370; P5: 223; P7: 105-106). P2 refers to it as a "habitual" circumstance (P2: 74), and P10 affirms that she "constantly" experiences sexual harassment and that sometimes she feels like "it is never going to stop" (P10: 450-452). Above that, it is indeed a condition that directly impacts on the cycling experience and habits: P2 mentioned that the harassment and comments made cycling an "exhausting" experience for her (P2: 370), and P4 reported that one of her friends avoids to cycle on a certain route because of the owner of a car workshop close to her home who accosts her any time she passes the place – for various years (P4: 435-438). Although as cyclists women are very exposed to this kind of harassment (as argued earlier, see 5.2.7), other modes of transport, are by no means a better option – P7 briefly mentioned the abuse women suffer in public transport (P7: 174-175) and P5 considered that it happened more often to her as a pedestrian, and that with a bicycle one at least is able to faster escape the situation (P5: 230-233).

Another issue regarding security is the risk of bicycle theft. P10 and P11 both commented that they once got a bicycle stolen and at least P5 and P7 have friends or acquaintances whose bicycles were stolen just recently (P10: 168; P11: 454-456; P5: 139-140; P7: 289). Most of the interviewees, but especially the frequent cyclists among them, were very concerned about this issue. As mentioned previously (see 5.2.2), since they are too afraid of leaving the bicycle simply locked in the street, the women mostly preferred not to cycle but to take another mode of transport in case that there is no secure space for parking the bicycle. P6 seemed to be particularly worried about bicycle theft, first

because she depends on it for her daily work as a cycle courier, and second because her bicycle also tends to be more exposed to theft since she needs to leave it on the street any time she enters a building (P6: 118-128). She often feels uncomfortable and stressed due to this fear, and apparently it is not unfounded: She commented that once waiting for the train she overheard a conversation of two men, “crooks”, discussing about how much money they could get for her bicycle (P6: 318-327). She did not want to take any risk and preferred to let the train pass to wait for the next one – because it might not only imply the loss of the bicycle but also experiencing a rather violent situation. P10 for example reported that recently she became witness of an assault:

“The day before yesterday, returning to my house at about 12 o'clock at night I find two guys leaving on a motorcycle very fast with a bicycle on the shoulder, and after that I go two more blocks and [there is] a girl crying, asking for help, please, they had stolen her bicycle. She was on foot, they had left her on foot, they did not care at all.” (P10: 421-424)

According to her personal observations, P5 mentioned that during the pandemic bicycle theft became an increasing problem (P5: 138-141). It seems plausible since with the growing value of bicycles (see 5.2.4 and 5.2.12) also the interest in stealing them rose – bicycle theft hence might be less of a problem if the bicycle was more accessible. P1 assumed a similar logic when arguing that she did not want to buy herself a bicycle since the risk of getting it stolen is too high considering the important monetary loss – or conversely, that she would buy a bicycle if it was more affordable and thus less of a loss in case it gets stolen (P1: 320-321).

Overall, security, or rather the sensation of insecurity, can be an important factor for the decision to not cycle – whether regarding robberies, sexual harassment, or bicycle theft. Since the general perception is that there is a higher risk for women than for men, most of the participants either found ways to deal with this insecurity by taking extra security measures or trying to confront their fears, or simply avoid using the bicycle in certain situations.

5.2.9 Organization

This chapter deals with the issue of how the bicycle as a transport mode fits into the everyday life of the women from a practical point of view – considering the different activities, times, and responsibilities the women have and the trips they need to make.

Activities, Times and Practicability

Naturally, this aspect depends a lot on the individual situation of each woman and might even vary from day to day. P2 for instance relates that her mode preferences change according to which of her workplaces she needs to go to this day, whether she needs to take her kids to school in the morning, whether she has planned another activity after work, or whether she is well in time and without other appointments to take a walk (P2: 117-131). Regarding labor and study related trips, some of the participants, as P3, P4 or P9, do find cycling useful and practical and make most of their trips by bicycle (P4: 45-46; P3: 8-9; P9: 315-318). Anyway, P3 remarks that one of her workplaces is further away and she does not have enough time to go by bicycle from one place to the other and thus needs to take public transport (P3: 45-47). For P5 the bicycle never seemed to be an option for transportation due to her daily routine of working full time and studying at night (P5: 20-36). This busy routine implied only short time frames to get from one place to the other, while at the same time having to travel long distances since the places were far from each other, as

well as uncomfortable travel times (early in the morning, late at night and at rush hour) that complicated cycling for her (ibid.). On the other hand, the bicycle can ease daily routines and can facilitate to manage all the activities. For instance, P4 emphasized that the bicycle made her save a lot of time on the trips to one of her previous workplaces where she needed only half of the time compared to public transport (P4: 23-26). Similarly, P1 supposed that the bicycle might also be the better option for trips one needs to make at rush hour for being faster and more comfortable (P1: 91-93).

Also P11 stressed that cycling and especially her cargo-bike facilitated her work and that it was easier for her than with public transport, to get and deliver her goods, or to transport her products to the markets where she used to sell them (P11: 373-376). Indeed, she emphasized that the cargo-bike helped her a lot in her everyday life when she needed to transport not only her children but also their schoolbags when bringing and picking them up, water and toys for an afternoon in the park, or the groceries (P11: 200-203/537-540). Anyway, having to transport goods can be a barrier for cycling for those who are not as lucky to have a cargo-bike at their disposal. P4 for instance, who plays in a music band, commented as well that many times she cannot cycle to go to her recitals – although in her case the instrument is not too bulky, the other equipment or costumes are usually too large to transport on her bicycle (P4: 115-118). P7, who also needs to deliver the yoghurt and kimchi she produces at home, mentioned that she avoids using her bicycle for those trips: First, she does not own a basket or similar equipment that would facilitate the delivery and second, the products she is selling need to be treated with a lot of caution to make sure that the jars and boxes do not fall over or break (P7: 240-243). Also P6, working as a bicycle courier, explained that she sometimes feels limited by the bicycle:

“I want to buy a motorcycle. [...] Yes, I'm already looking for it, even if it's in installments, but I'm going to do it. So, to have a bicycle, to continue with a bicycle, but maybe to make longer trips or bigger orders, carry more things - more weight is more money.” (P6: 441-444)

As she makes clear, it is not only a problem of practicability to look out for other modes of transport to carry things and deliver products, but also a question of economic opportunities – what applies to her and to other bicycle couriers, as well as to self-employed and informal workers as P11 or P7. However, for the everyday needs as doing the groceries, the bicycle with a basket seems to work fine for the women. P3 mentioned that thanks to the bicycle she can go to a market that is further from her home and P5 perceived it as very comfortable not having to carry the weight (P3: 70-73, P5: 46).

Care Work and trips with children

Another important part of the activities and daily routines is also formed by care work – that in view of the whole society still is unequally distributed among the genders and in many cases mostly rests on women's shoulders. Without knowing much about the personal situation of each woman regarding her care responsibilities (since it was not the main topic of the interviews and maybe would have been too private), still there were some clues that indicated that the care work they do, might impact their choice to cycle or not. For instance, from the interview it seemed like P11 was the main responsible for the childcare in her family. She explained in a quite detailed way what it meant for her to take care of her three little daughters, and she made clear how much energy and time it consumes in her everyday life (P11: 204-208). Based on this, P11 argued that this care work on top of her remunerated work, makes the car become the preferred mode:

"This what I share with you, that raising kids and working is a lot, it demands a lot from me. So public transportation is much slower and more exhausting, but the car, [...] the truth is that it gives you half an [hour] - 15 minutes one way, 15 minutes return [...] - to the center, sometimes it is even an hour. And all this time difference, and on top of that the girls are not exhausted and have a different energy, allows me to work. [...] Now it has to do with that, with the demand of the work we were able to do, and with the routines they have - three girls, three schedules, three things." (P11: 225-235)

Although she is used to travel by bike with her children and generally appreciates the bicycle as a mode of transport, only the flexibility, commodity and rapidity of the car allow her to do both, care work and remunerated work. Hence the bicycle might not always fit into the busy everyday life of a mother with care responsibilities, due to the different activities and times that need to be coordinated and to the additional energy and motivation it might require to cycle. Another reference to the connection of care work and cycling can be seen in the case of P8. She mentioned that it is usually household chores that keep her from cycling for her personal recreation. In the same vein, she noted that the short bicycle tours she makes with her son on the weekend are not for her, but mostly for his recreation, while she accompanies him to make *him* have a good time – thus cycling in some cases even might become part of the care work (P8: 299-305).

In this context it is also necessary to take a look at what it implies to be traveling with children. First of all, it means to adapt oneself to their rhythm – one can only go for distances and at speeds that are feasible for them (P11: 218-222). Except one goes by car from door to door, this affects the mobility with any mode of transport. Almost all trips include at least some distances one needs to walk and those parts of the trip alone can imply a huge effort. As P11 illustrated, when walking with young children it is not only that they go slower or that they cannot keep up during long distances – but it is also that they get distracted and take even more time.

"10 blocks with a child is as if it were 30 blocks." [...] "For mothers, walks with small children [...] are not easy. They get tired, they want to be lifted up, they are sleepy. [...] Each step is a proposal to a game, it is an adventure between one year and three years. Then two blocks become a whole odyssey, it's a lot." (P11: 37/111-118)

Hence, traveling with children might become an exhausting and difficult process that consumes a lot of time and energy of both, children and accompanying persons. As argued earlier (see 5.2.4), according to P2 and P11, traveling with the public transport can be challenging – due to the walking distances and waiting times, but also due to the ride itself, due to having to get onto the overcrowded bus at rush hour to go to school, looking after two or three children and helping them to get on and off, and having to carry all their schoolbags and backpacks (P2: 117-121/151-160; P11: 217-220). For this reason, both women prefer an individual transport mode when making trips with their children, whether the car or additionally the bicycle in case of P11. Of course, not all women have these options at their disposal, and for instance P12 either takes the public transport or, if she has enough time, walks with her little son since these are the only transport options available for her (P12: 17-18).

Concerning the experience and possibilities of using the bicycle with children, there were different perspectives. On the one hand, P2 and P8 only cycle for recreation with their kids and were more concerned about the concrete experiences and challenges in traffic. According to P8 it is hard to relax when cycling with her son: she always has to be watchful, and constantly worries about him not hearing her indications or him not doing what she told him to do. As referred to earlier (see

5.2.6), at the beginning she was also unsure about how to accompany him, whether to go behind or in front him (P8: 274-275). Furthermore, both P2 and P8 mentioned that the slower and maybe more insecure rhythm of children cycling, might imply conflictive situations on the road – either due to other cyclists not being patient enough and getting upset (see 5.2.3), or by inducing unsafe traffic behavior as for example risky overtaking maneuvers in other cyclists (P8: 256-258; P2: 326-327). On the other hand, P11's perspective focused more on how she achieved to manage her (care-) mobility with the bicycle. As quoted above, P11 found it very exhausting for herself and for her children to make trips by foot – so she started using her normal bicycle for short trips in the neighborhood, transporting one of her daughters in a bicycle seat at the back and the other on the handlebar to spare them from walking. When having her third daughter she had to look for other options and started cycling with two seats, one at the back and one at the front, while carrying the youngest in a baby sling on her back. Anyway, many times the girls on the seats fell asleep after some time and she ended up walking as well. After casting aside buying a tricycle or a bicycle trailer because of finding them not safe enough, she discovered the cargo-bike that could solve her problem and facilitated transporting the three of them comfortably (P11: 34ff). Indeed, P11 commented that now, that the girls grew older and know riding the bicycle themselves, it costs more effort to continue cycling for the everyday transportation – due to the different activities, due to larger distances they need to travel now and that are not always feasible for the girls, but also due to the complications it implies to always carry down all the bicycles from the apartment (see quote above; see 5.2.2).

All in all, cycling can be a good option for trips with younger children since it is an individual, flexible and door-to-door transport mode – but it has its limitations in the distances that are possible to travel when the kids start cycling themselves. Also, it might involve more worries and a less relaxed travel experience (depending on the other modes available and on the personal preferences) and it implies that one needs to be able to afford buying either a bicycle seat, cargo-bike, bicycle trailer or children's bicycle (see 5.2.4).

5.2.10 Emotions

Assuming that people might be more likely to start or continue certain habits when they have positive feelings and associations about it, it can be fruitful to have a look at the emotions of women regarding cycling, and subsequently at the experiences or images that cause them. However, the emotional responses of the women are always directly connected to one of the other discussed factors. As it is very subjective and personal, expectedly, the emotional responses the women expressed regarding cycling were very diverse. In some cases, they formulated their feelings and emotions explicitly, in other cases rather indirectly but at least with a noticeable positive or negative connotation.

Among the negative or discouraging emotions, fear was probably the feeling that was expressed most commonly in the interviews – mostly regarding situations in traffic where the women felt unsafe, but also regarding their personal security. Some women described themselves as rather “fearful” in general (P8: 206; P1: 119-121), some mentioned to be afraid of cycling in the urban traffic in particular (P2: 35; P12: 20-21), or at least to have felt afraid in some situations when cycling (i.a. P5: 95; P7: 62-63; P4: 86/94). P8 described her feeling the following way, expressing that cycling is an extraordinary stressful challenge for her that makes her feel very unconfident:

"I mean, it scares me. I feel that it is something that for others is a trivial thing and for me it is adrenaline, [...] for me it was such an adventure to go there that I arrived completely sweaty. But it was not hot - it was between fear and adrenaline getting there and for me it is a challenge. I feel much more like a little girl, much more immature, less prepared than in other things in life - that I teach, I am a mom. I feel as if I were a child, as if I am not prepared to face this situation of riding a bike on the street." (P8: 208-215)

However, fear seemed to be a more common feeling among the non- and infrequent cyclists than among the frequent users. Furthermore, P7 added that among the non-users, especially among those with no or very little cycling experience, embarrassment can be an emotion that prevents them from cycling or learning to ride a bicycle (P7: 5-6/191-197). On the other hand, among the frequent cyclists of the interviewees it was more common to perceive a certain anger or annoyance regarding some situations they face when cycling. The women mostly referred to the lack of consciousness and respect of other road users and to their reckless behavior, but also to the deficient design of cycle paths, the lack of bicycle parking facilities, or sexual harassment that made them indignant, angry, or displeased (i.a. P4: 238/304; P9: 311-312/155-156; P10: 321-323/300-301; P2: 77; P7: 380).

Regarding the positive emotions, a commonly expressed feeling was the joy or pleasure the women get from cycling. They mentioned that it "lifts the spirits" (P7: 323), that "it brings you happiness" (P4: 491) or puts you in an "euphoric" state (P6: 133). Interestingly, P6 also referred to the bicycle as something making her feel like a child again, but in contrast to P8 in a completely positive way:

"I love it! I am 50 years old and when I was a kid, I used to ride my bike all the time. [...] Then I did not ride it anymore and when I came back now with the bicycle, [...] when I got on it - wow, I am 12 years old again! I am something, I am so fast, I pick up speed, I speed up, it is something that I surprise myself with, oh my God!" (P6: 93-97)

Also, the sensation of "freedom" was mentioned by some of the participants, in the sense of being independent and being able to move through the city, but also related to having the possibility to connect and get to know the city in a different way (P3: 243; P6: 42-44; P5: 457-458; P9: 482-485).

5.2.11 Personal Motivations

This section summarizes the different intentions and motivations of the participants, respectively the individual barriers for them to use the bicycle that have so far not been discussed in other chapters. Due to being very personal, these factors are quite diverse, differ from woman to woman, and are thus not generally transferable nor a complete compilation. Still, they might be important and relevant in each individual case.

It seemed that very general ideas or ideologies such as the sustainability and the benefits cycling has for the environment were not too important for most of the women. For the ones who mentioned it and who are conscious about this positive impact, it probably is an encouraging and confirming aspect of cycling, but in most of the interviews the topic remained a marginal note. Only P7 made it part of her argumentation that she sees cycling as a transport mode of the future and criticized the current car-domination in the city as such (P7: 18-19). P5 referred to another rather abstract factor by framing the bicycle as an empowering mode of transport especially for women due to its' flexibility and autonomy (P5: 464-468; see 5.2.7). Anyway, the transition between abstract ideas and practical motivations is fluent: For instance, also P11 and P7 describe the autonomy and flexibility of cycling as an advantage, but more from the practical point of view, since they can avoid waiting times and extra costs (P7: 119; P11: 97-101). Similarly, many of the

participants mentioned the health benefits of cycling as a motivation. P7, P2 and P9 mostly focused on the physical and exercising effects of cycling, and particularly P9 highlighted that she is very sporty and needs to be in motion all the time, making the bicycle an attractive transport mode for her (P9: 52-61; P7: 306-308; P2: 219-222). She as well as P1 supposed that having an affinity to sports and fitness might increase the willingness to cycle – not only for exercise but also for transportation (P9: 262-232/269; P1: 85). P11 above that also referred to the effects on the mental health and general wellbeing, particularly concerning her children. She perceived cycling not only as a transport mode for exercising oneself and “staying healthy”, but also described it as a more fun way of mobilization, a way to “be connected with nature”, and a less stressful way to realize trips in the sense that there is no need to hurry her daughters (at least with the cargo bike compared to traveling in public transport), and that they get to school more awake (P11: 162-169/146-150). Likewise, also the other frequent cyclists emphasized this positive effect on their wellbeing (see also 5.2.10). P4 said that cycling helps her to relax, especially at night when going home (P4: 74), and that it makes her feel good:

“We should all want to get on the bike half an hour a day, it's good in every way, it not only transports you, but it oxygenates you, it gives you happiness, it gives you adrenaline, I don't know, I'm not a doctor, but it generates a lot of things that are great.” (P4: 490-492)

P3, P6, P7 and P10 expressed very similar perceptions: either that it distracts her after work (P3: 161) and that it clears her mind off the world (P6: 458), or that they enjoy going fast, the feeling of the air, the adrenalin, and the sensation of freedom (P3: 324; P6: 207-208; P7: 121; P10: 284). - Interestingly, also P8 talked about the adrenalin she feels when cycling, but in an entirely negative sense because she feels stressed due to being afraid of the traffic (see 5.2.10 and 5.2.3). - P6 and P9 furthermore added that they enjoy cycling because of the way they can experience the city (P6: 43-44; P9: 344-346). P9 even commented that she always tries to take different routes in order to get to know more places and to not get bored (P9: 308-309). For P6 and P10 as bicycle couriers it is also the economic necessity that makes them cycle, but both are very satisfied that they can make a living with cycling, so something they really enjoy doing (P6: 42-43; P10: 97). In case of P10 cycling plays even a more important role, as she describes it as her “lifestyle” she does not want anything to interfere with and as it is her ambition to push her boundaries, become faster and more reactive (P10: 11-13/346-347).

5.2.12 Pandemic

Due to the circumstances of the time this thesis was elaborated, the Covid-19 pandemic became a relevant factor of impact. The pandemic changed the conditions during the years 2020 and 2021 in nearly every aspect of life and thus also influenced women's decision to cycle. Still, it can be expected that some of these changes have solidified and may remain part of the everyday life. For most of the interviewees the pandemic changed their mobility habits as a whole, as well as their usage of the bicycle. For some of the women, as for P3, P4, P5 and P12, the pandemic generally reduced their mobility and made them stay at home more often. The public transport, that plays a central role in the mobility of most of the participants, became less attractive due to the very restricted permissions to use it, but also due to the risk of becoming infected. P8 comments that she tried to avoid it or preferred other modes of transport instead:

“Because of the pandemic I never took the subway again, I never went back to the subway, which I used to take a lot because I used to travel quite far to teach classes, especially at the university. So now I take

the bus and if it is very crowded I take a taxi, so to not be cramped with people and with stale air, or I walk, too." (P8: 133-136)

P2 and P11 added that they started to use their private car more often than before (P2: 101; P11: 231-233). Anyways, the pandemic also created many new bicycle users: On the one hand, the experienced and long-standing cyclists among the women, as P3 or P9, noticed that the bicycle traffic has increased significantly. P9 said that "there are moments when it seems like there was a rush hour but of bicycles – something that never happened" (P9: 152), while P3 reports a similar observation from the cycle path in her street that in the morning and evening hours appears a "highway" for being much more crowded than usually (P3: 296). On the other hand, also some of the interviewed women started cycling (again) along with the pandemic. P7 learned riding a bicycle during the pandemic as she took advantage of the calmed traffic conditions and since she saw it as a good substitute for the public transport (P7: 49-51). Still, she found it difficult to start as there were no cycling courses and groups to join in the lockdown where she could have found support (P7: 345-347). P2, P5 and P8 already knew cycling, but got back to it in this time, at least every now and then and mostly for recreative purposes (P5: 76-79). Like P5 (P5: 270-272) and P7, also P2 mentioned that traffic conditions were more favorable during the lockdown and that it was a more enjoyable experience to go by bicycle.

"In the quarantine I started to ride a lot more because the street was empty and the truth is that I found the use of the city amazing, the new recognition of the city with the bicycle in the pandemic was incredible. In fact it is no coincidence that my children have learned to ride a bike in pandemic, for this reason too. And the circulation in the city is different [...] - now not anymore [...], now it is again very difficult to ride a bicycle. But the months of pandemic were glorious." (P2: 202-208)

For P8 together with her son it was mainly an option to get out of the house on the weekends, to have an additional physical activity in the frame of what was permitted and to get distracted (P8: 55-57). Also P2 commented that cycling became an appreciated activity for her older children who both learned cycling in this time (see quote above). P11 on the other hand mentioned that it was rather hard for her daughters to get back to cycling after the lockdown because the long period of inactivity had left them with little endurance and the first times it was not possible to travel longer distances (P11: 240-245). Furthermore, for P6 and P10 the pandemic was the main cause for starting to cycle for their living – in both cases because of an economic need as they lost their jobs or needed to find another way of generating income (P6: 25-28; P10: 97-100).

As a consequence of this sharp increase in cycling, the bicycle market is booming, and the demand for bicycles and the corresponding prices rose (see 5.2.4). According to P5 and P9, during some time in the lockdown there was a shortage of bicycles as well as of replacement parts – not only due to the higher demand but also due to detained importations – lowering the accessibility of cycling even more (P9: 162-164/177-178; P5: 417-420). P9 commented that the commerce with bicycles became an important business and that even banks reacted to this development and started to provide specific credits for purchasing bicycles (P9: 160-161/178-180). Coming along with this increase of monetary and practical value, P5 observed that in the same period the cases of bicycle theft seemed to have increased as well (P5: 138-143).

5.3 Results and Consolidating Discussion

This subchapter summarizes the main results of the empirical work and relates them to the theoretical framework of the thesis and further existing research. Above that, it aims at emphasizing

the gender specificities of the findings to make clear in which aspects the particular perspective of women might differ from men. By doing so, this chapter responds to the first part of the research question: Which are the reasons for women in CABA to cycle less frequently than men? Also, the chapter formulates a concluding hypothesis that can be seen as a theoretical culmination of the work.

Overall, all women showed a very positive attitude towards cycling: Independently of their individual usage or non-usage, or their experiences and perceptions, all of them seemed to see cycling as a pleasant activity and generally as a good way of transporting themselves. This indicates that the lower participation of women in cycling in Buenos Aires is indeed not due to a mere lack of interest or due to an anti-cycling attitude, but that there are certain circumstances and conditions that make the bicycle feel less of a mobility option for them. In short, all of the previously stated dimensions with a possible impact on women's decision to cycle or not (see 2.3), were found to be relevant up to a certain extent for the women in Buenos Aires as well. However, by means of the diverse sample of interviewees, it could be shown that the relevance of each of the factors varies from woman to woman, as well as the degree of impact the factors have, either as a barrier or a facilitator for cycling.

For instance, there were notable differences in the perception of non- or infrequent users and frequent users. Generally, the women who cycled less frequently tended to describe more barriers than the ones who actively cycle in their everyday life, although also those mentioned many drawbacks. Still, the causality is not clear – it might be that they do not cycle because there are more barriers for them, or it might be that they perceive more barriers because they did not use the bicycle in the past, are not used to it, or did not find a way to deal with them yet. Frequent users on the other hand might have the same difficulties, but do not perceive them as a hindering reason. Also, some of the barriers noted by non-users or infrequent users differed from those that were perceived by the frequent cyclists. There were some barriers that were mentioned to be important independently of the current usage (traffic climate, traffic safety), others were perceived differently according to the usage and cycling experience (infrastructure). These are observations that can be confirmed by other studies, among those Sanders (2015) who describes that worries about traffic safety do not decrease with more cycling experience, or on the other hand, Félix et al. (2019) that found that a lack of infrastructure is perceived to be a greater barrier for non-users than for cyclists.

Still, the traffic safety in Buenos Aires – and closely related to this the infrastructure and the traffic climate – was one of the central issues in the interviews with all the women. Although the participants were generally pleased with the cycle paths as they provide them with a rather safe space, their main critique concerned the unequal distribution of the amenities throughout the city, as well as the partly poor design and quality of the cycle paths that diminished the perception of the safe space. Furthermore, the lack of secure bicycle parking facilities was seen as a serious problem. Anyway, similar to what Lindenberg Lemos et al. (2017: 86; see also 2.2.3) have stated, the solution for the lack of traffic safety for cyclists cannot only be seen in a proper infrastructure. Rather, the lack of traffic education and the lack of mutual respect need to be considered as important issues, too. Both were aspects commonly mentioned by the interviewees as well, as they emphasized what Pablo Wright (2010; see also 3.2) called the road culture (*habitus vial*) – so the existence of a parallel normative system that on the one hand, is based on a clear power hierarchy between different road user groups (where the bicycle, but also women, are not on the top positions), and on the other hand, implies a behavior that many times disrespects the common traffic rules.

However, especially regarding the perception and evaluation of the infrastructure, the traffic safety and the traffic climate, the influence of the individual cycling level and -experience seems to be the crucial aspect – and not too much the condition of being a woman. Nevertheless, within this apparently gender-neutral factor, there might be differences regarding how important these factors are evaluated by men and women, and which relevance they have on their mobility decisions. As this thesis only reflects on the perspective of women, it cannot make any statement regarding this issue. But taking into account some existing studies, it becomes clear that the perception of traffic safety and cycling infrastructure eventually does depend on the gender. Psychological studies indicate that women are less likely than men to engage in risky situations or decisions, and that they are inclined to perceive the possible (severe) negative outcomes stronger than the possible enjoyment of an activity (Byrnes et al. 1999; Harris et al. 2006). That the interviewed women tended to describe their situation on the bicycle as “exposed” and “vulnerable” can be interpreted as a tendency in this direction. Furthermore, in cycling research, various studies showed that the type and quality of the cycling facilities was more important to women than to men, as they had stronger preferences for separated cycle paths, valued good road conditions higher, and thus were less likely to perceive the overall cycling conditions as safe (Krizek et al. 2004; Garrard et al. 2008).

Anyway, even the most ambitious or very frequent cyclists in many points see themselves confronted with difficulties and barriers that sometimes makes them decide not to cycle. As stated in the theoretical framework, besides the traffic-related factors, the principal factors mentioned in the literature to often impact cycling among women, were security issues, care responsibilities, as well as social and cultural restrictions. The findings from the interviews with the women in Buenos Aires could confirm this, but furthermore identified some additional factors that were crucial for women’s cycling behavior: the affordability of bicycles, the necessary abilities, and the current conditions of the pandemic.

With respect to the security issues, it can be expected that there is a similar phenomenon like in the traffic safety: As women tend to be more risk-averse than men, they avoid situations that might imply a risk for them, for instance certain neighborhoods of the city or cycling at night. Hence, worries about security might have more relevance for women than for men in the decision to cycle, although the actual risk of an assault or robbery might be similar. However, especially women face situations in which they are confronted with sexual harassment (verbal, non-verbal, physical) what some of the interviewed women mentioned as an everyday experience in Buenos Aires that makes them feel uncomfortable or insecure. When cycling, they feel rather exposed to this kind of situations, and the public space turns into a hostile environment – similar to what Vázquez (2017) has stated for the case of Mexico City as well.

Not surprisingly, the care responsibilities were mainly a topic for the mothers among the interviewees. They generally confirmed what the literature had indicated: that the bicycle might not always be the preferable transport mode when travelling with children – and as women are usually still the main caretakers, for many of them the bicycle does not seem to be a mobility option. Although the interviewees preferred to use the car for their trips (in case of having one), compared to walking or the public transport, the bicycle has a lot of potential, especially when transporting younger children. With older children that already cycle by themselves, it becomes more complex, as it implies more worries about traffic safety, but also considerations about which distances are feasible, and how to coordinate different activities and trip chaining. Most of the literature that was considered for this thesis, did not put attention to what these age differences of children implied for the care mobility by bicycle, but they seem crucial to understand some nuances in women’s decision to cycle with their kids. Above that, as Riggs/Schwartz (2018) have emphasized as well,

the case of P11 showed that cargo-bikes can ease the problems that care work might imply for cycling as it provides the possibility to transport not only children, but also larger and heavier goods or groceries.

The analysis of the different socio-cultural factors showed that there are still many ideas, imaginaries, norms, and prejudices that hinder women from cycling – both concerning gendered ideals and expectations, as well as concerning the mobility culture. In the interviews, gendered images and expectations showed for example regarding the esthetics or appearance of cyclists, similar to what other authors have stated previously (i.a. Steinbach et al. 2011). The social pressure on women to look a certain way makes some of the interviewees question the compatibility with the bicycle, at least in specific occasions or regarding certain (very feminine associated) looks. With respect to the mobility culture, it became clear that major parts of the society do not yet perceive the bicycle as a proper mode of transport but have a rather recreative notion about it.

However, especially the overlap of both aspects is intriguing, as it seemed like the conditions of being a woman and of being a cyclist summed up to create a whole new perspective. In this context, the concept of the intersectional feminism provides very interesting parallels: As a short reminder, the concept of intersectionality describes the interwoven and overlapping power structures and forms of discrimination (for instance due to the gender, ethnicity, social class etc.) that, when coming together, form specific identities and experiences for the affected individual. Transferred to the case of cycling among women, this means that the power hierarchies in traffic intersect with the gender-related power hierarchies in society. Thus, cycling women are not only vulnerable as cyclists, but also as women; their experiences differ from those that cycling men, but also non-cycling women might have. Taking the idea further, also other factors or categories going beyond gender might intersect with cycling. Lugo points into a similar direction when she cites a cycling activist who “sees the bike movement as an opportunity for cyclists to develop an awareness of race, class, and gender discrimination because feeling harassed by motorists while cycling may be an otherwise privileged person’s first experience of discrimination” (2013: 205).

Furthermore, it seemed like there was a relation between the bicycle usage and the social environment of the women which supports Bourdieu’s habitus concept indicating that people tend to behave according to their social context. The frequent cyclists among the interviewees appeared to be more likely to know or to be in touch with other cyclists. Related to this, the importance of role-models became clear, especially if they are persons the women can identify with: other women or persons in similar roles. Above that, it could be shown that the perceptions of cycling may vary between different social strata and different age groups.

The probably most unexpected or underestimated factor were the difficulties that the women faced regarding the affordability of cycling, especially as one of the benefits of the transportation on the bicycle is generally seen in its low costs. Due to the difficult economic situation in Argentina, that in addition was aggravated by the pandemic, and due to the skyrocketing prizes of bicycles that are not even affordable for persons from middle class, large groups of the population are excluded from cycling. Considering that women tend to have less economic resources available than men, are more likely to form part of the lower social strata, and are more likely to be affected by poverty, cycling might be even less accessible for women. Therefore, although the issue of affordability applies both to men and women, women might be more strongly affected by it – a somewhat hidden gender difference, similar to the one described above concerning the traffic-related factors.

In relation to the abilities and the skills that are necessary to cycle, especially the knowledge about safe cycling in the urban traffic seemed to be an issue, as it relates directly to the perceived traffic

safety (see above). At least some of the interviewed women seemed to lack confidence when cycling in the city, as well as awareness about the “rules of conduct” for cyclists that could facilitate traffic safety. Furthermore, not knowing how to ride a bicycle might be an underestimated barrier for some women.

Finally, the pandemic influenced the cycling behavior in Buenos Aires – regarding the increasing overall relevance of cycling, but also regarding a change in the individual motivation among the interviewed women. For some, the bicycle became an important mobility option, for others, one of the little possibilities in everyday life to enjoy themselves, and again for others a solution in emergency to create income. The lockdown established circumstances without which these changes would not have happened in such a short time, but which by creating new users also urged the necessity to adapt the conditions.

On the other hand, some factors seemed to play only a marginal role for women’s decision to cycle or not. While individual motivators were rather important (doing exercise, benefits for personal wellbeing etc.), general imperatives or ideologies (cycling as a sustainable mode of transport) did not seem to have a direct impact on the cycling behavior of the women. As expected, the factor of the relief had no relevance at all as Buenos Aires is very plain.

To sum up, the following hypothesis can be formulated: The existing gender inequalities in a society lower women’s participation in cycling. Since all the factors of impact which act as barriers for cycling, directly or indirectly relate to existing gendered norms, expectations, and power structures – whether regarding the care-work, the “feminine” appearance, sexism, sexualization, economic discrepancies, or differences in the socialization and perception – the leveling of these conditions would facilitate women becoming as likely as men to use the bicycle for their transportation. Or, to reformulate the hypothesis: More gender equality in the society in general fosters women’s participation in cycling.

5.4 Critical Reflections and Limitations

This section aims at having a critical view on the empirical work of the thesis, considering the overall conditions of the investigation, the methodology, as well as the presented results.

All in all, the exploratory nature of the work seemed to be adequate to approach the topic. Although the existing literature regarding the topic already predicted almost all of the factors of impact that were relevant for the interviewees, the open exploration with qualitative methods was helpful to evaluate the importance of those factors in the context of Buenos Aires, and to comprehend their peculiar local forms and specificities. Furthermore, it made possible to identify some themes that were not as visible in the literature, but that were found to strongly impact on the women’s cycling behavior: affordability, abilities/education, as well as the pandemic as a contemporary issue.

Due to the pandemic, the field access but also the possible methods were rather limited. Probably, for instance participatory observations in the city, in a cycling school, or in different cyclist’s events would have been a rich complement for the investigation, but as those were not feasible in the period when I was staying in Buenos Aires (until September 2020), the only option was to choose online formats. As described extensively before (see 4.3), this came along with some difficulties. However, the conducted interviews could provide in-depth information and individual but diverse perspectives.

For being a woman myself and by presenting me as a cyclist, the field access to find women for the interviews was not too difficult, and it probably also helped the women to open and speak confidently about their concerns as they could expect me to comprehend them. Anyhow, being not Argentinian but German might have created a certain distance. In some cases, it seemed like the women perceived me as an expert due to my origin, coming from a rather “cycle-affine” country/continent, assuming that I know better than them how the city should look like and which conditions it needs for cycling – which maybe left certain aspects unspoken. In contrast, not being from Buenos Aires sometimes made them feel like they needed to explain certain things to me, which often created situations in which they expressed their understandings, interpretations, and reflections in a very direct way.

Regarding the interpretation of the data, the same conditions might have had an impact. Due to not being Argentinian and lacking certain cultural insights, I might have misinterpreted or overlooked crucial aspects from the interviews. Being a woman and cyclist myself on the one hand might have made me more empathetic and might have facilitated me to comprehend the different statements and aspects. On the other hand, it might have implied an important bias if I had been trying to force the participants’ statements to fit my understandings and experiences that I gained for example with the cycling infrastructure in Buenos Aires or with sexual harassment in public space.

Above that, due to the topic’s complexity and the aim to address it in an encompassing, exploratory way, it was unavoidable to get in touch with aspects that lie outside of my main competence as an urban planner and mobility specialist. As I am neither a sociologist nor a psychologist, some parts of the work might seem rather superficial or maybe deficiently interpreted, but as they are relevant factors to understand mobility-related decisions it was necessary to integrate and mention them. However, this lack of an in-depth understanding of all factors limits the possibilities to realistically evaluate the overall impact of them. Furthermore, the small sample size as well as the mere qualitative approach and the open data collection method impeded to assess the degrees of relevance of each of the aspects – this work thus only can answer the question *which* are the factors of impact, but not *how much* impact they have on individual mobility decisions.

Another limit lies within the scope of the work in which it was only feasible to represent the perspective of women. Many of the influencing factors are not completely gender-specific and apply for men cyclists as well. Anyway, it was necessary to include them in the investigation as they are certainly also relevant for women’s mobility behavior. But, in the absence of similar interview data from men, it is not possible to compare the perspectives and draw an actual conclusion about what differentiates women's experiences and needs from men. Presumably, in many aspects there would be an overlap in the topics and difficulties – though there might be differences in how they are evaluated. Nevertheless, the interviews achieved to give valuable insights into women’s perspectives and the previous subchapter attempted to elaborate the gender-specificities of the results as far as possible. The perspectives represent a diverse sample of women, but they do not yet represent all the possible perspectives either – statements from women of other social classes, from other cultural backgrounds, from pregnant women, or women with disabilities could have enriched the sample and the results even more.

6. POTENTIALS TO PROMOTE CYCLING AMONG WOMEN

This chapter is dedicated to answering the second part of the research question: How is it possible to increase the percentage of women in utility cycling in CABA? It draws a practical conclusion from the empirical work's results to provide a perspective for consequences. It summarizes the wishes, proposals and claims expressed by the interviewed women and presents some existing approaches that tackle the issue. Derived from the mentioned resources and the results of chapter 5, in 6.3 a catalogue of possible measures and strategies to promote cycling among women in Buenos Aires is presented. Finally, this catalogue is compared to the city's projected plans for future developments.

At this point, it is necessary to look back at the previously stated, very general hypothesis that increasing gender equality fosters women's participation in cycling. Although this might be the underlying problematic of the issue, by formulating it this way it becomes too abstract and complex to be resolved in the framework of the thesis, as it requires a whole social and cultural change in all parts of life. Hence, the chapter focuses on the concrete barriers and difficulties women currently face when cycling (and that exist due to the overall gender inequality), and on what urban and traffic planning can provide and create to improve the conditions and circumstances and make more women cycle. On the other hand, it is important to point out again that by doing so, urban and traffic planning can actually contribute to more gender equality.

6.1 Claims, proposals and wishes of the interviewed women

As part of the interviews, the women were asked (usually as a closing question) which conditions or circumstances needed to change or adapt to make cycling an option for their mobility, respectively what it needed to make cycling (even) more comfortable and attractive for them. The answers the women gave to this question provide a first basis to approach this part of the work and are summarized in this section. The wishes, claims and proposals the interviewees formulated were rather pragmatic and referred mainly to concrete situations and aspects.

Most of the women's wishes were dedicated to the infrastructural and traffic-regulatory conditions. Many women claimed that it needs more cycle paths (i.a. P6: 469-471; P8: 312) and that they need to be equally distributed throughout the city (P1: 301-303). Furthermore, they should be wider (P8: 312-313), only unidirectional (P5: 394-395), better signaled (P3: 266-268) and in better conditions regarding the pavement and unevenness (P3: 249-252). The claim for more and better infrastructure also applies to bicycle parking facilities which many women found important to improve (i.a. P11: 257-258; P4: 450-451; P7: 360). Also, the intermodal connection with the train and subway was mentioned as an aspect that needs to be strengthened by providing more space for bicycles in trains and better access to the stations (P4: 451-456; P11: 463-464).

Regarding the regulatory framework, one proposal was to reduce or strictly regulate the car traffic in the city to redistribute spaces and have more space for cycling (P4: 444-450). Another suggestion was to increase policing and fining for instance for cars blocking the cycle path (P10: 396-404). Related to that, some women wished for clearer rules and norms, and more regimentation concerning the use of the bicycle and the interaction with vehicles (P9: 532-533; P7: 364-365).

However, the latter wish is closely linked to another major claim: some women emphasized the need for more traffic education in general as well as for a specific cycling education for everyone – not only to ensure that people know about the norms and recommendations, but also to increase the respect towards cyclists, and to already provide children with the necessary skills, confidence, and knowledge to use the bicycle (i.a. P1: 299; P8: 398-403).

Furthermore, the women highlighted the need to make bicycles more affordable and thus to make cycling accessible to more women. The women proposed loans with small or no interests that can be used in a flexible way to buy the bicycle one needs (P11: 518-520; P5: 429-439; P1: 318-333).

Less concretely, they claimed that the security needs to be improved (P1: 303-308), and that it needs a “integrated social change” to make women feel more comfortable in the public space in general and make them suffer less from sexual harassment (P4: 460-464).

6.2 Learning from Best Practice

In order to elaborate recommendations for action for Buenos Aires, it is worth taking a look at which ideas already exist and what is being done elsewhere to motivate women to use the bicycle and to make cycling easier and more comfortable for them. This section collects and summarizes the approaches and strategies that either are being implemented in other cities already, or that are recommended by different institutions or NGOs. As there is a whole series of publications and examples available, a selection had to be made. The ones presented here were chosen because of their all-embracing approaches and because of presenting concrete proposals for specific problems. Also, publications and projects from the Latin-American context were treated with preference as they deal with a similar initial situation like Buenos Aires.

Bogotá, Colombia: Strategy 50/50

First of all, the city of Bogotá, Colombia needs to be pointed out as a city that is integrating a gender perspective in their planning for cycling mobility. The city set itself an ambitious goal and approaches it in an integrated way taking into account various dimensions: With their strategy *50/50 More Women on Bicycle*, Bogotá wants to achieve the parity of women and men in cycling until 2038 by “guaranteeing a safe, comfortable and gender-sensitive infrastructure, the implementation of strategies to promote the use and enjoyment of bicycles with a gender focus, and the development of personal security strategies focused on reducing street harassment and abuse of women cyclists” (Secretaria Distrital de Movilidad Bogotá 2020: 3).

Besides the mere extension of cycling infrastructure, the city takes into account the implications of the care mobility for instance by projecting cycling routes close to schools (ibid.: 2) and aims at sensitizing and training traffic planners for designing infrastructure with a gender perspective (ibid.: 3). Furthermore, in a study the city is exploring the effects of cycling infrastructure on the bicycle usage – by means of their projected large-scale cycling avenue (Ciclo Alameda Quinto Centenario) which was planned including a gender perspective (ibid.: 2; GIZ n.d.; Buis 2018). The project will create an exclusive, separated cycle path that gives priority to active transport modes, connects socio-economically diverse neighborhoods, and aims at providing more security due to illumination and intensively used public spaces (ibid.). Another important infrastructural factor are the public sharing bicycles as they facilitate the access to cycling by providing an affordable alternative for those without sufficient economic capacities to buy a bicycle (Puentes 2021).

Furthermore, the city focuses on publicity campaigns to sensitize and inform all road users about norms and behaviors to foster traffic safety (Secretaría Distrital de Movilidad Bogotá 2020: 3). Above that, communication campaigns and expositions in public space are used to generally motivate to cycle by showing the benefits, by presenting diverse women who cycle, each with short statements about their experiences, but also men in the role of care takers (GIZ n.d.) – all to create visibility and new images and associations regarding the bicycle and gender.

Regarding the personal security of women when cycling, the strategy stipulates to implement interventions in the public space (Puentes 2021), especially improving the illumination and surveillance to increase the security of women (Secretaría Distrital de Movilidad Bogotá 2020: 4).

Gender and Active Mobility - Actions to leave no one behind (Colombia)

In this publication, the research organization Despacio and the GIZ (German Corporation for International Cooperation) focus on applying a gender perspective in the active mobility modes – what distinguishes it from other publications that usually have an emphasis on the public transport. Based on a case study of three cities in Colombia, they formulate measures and recommendations according to four main themes: mobility patterns, personal security, traffic safety, and participation in the labor market, (Despacio/GIZ 2021: 91ff.).

Regarding the specific mobility patterns of women, the guide proposes to provide cycle paths not only on all main avenues of the city, but also in the peripheral parts of the city to connect the neighborhoods with the massive public transport. For the same reason, the stations of public transport need to provide sufficient bicycle parking facilities, as well as a station of shared bicycles that offer bicycles with lights, basket, and some with children's seats. Also, resting places along the cycle paths (benches etc.) can be helpful especially for elderly or disabled users, but also for children. Above that, they point out the importance of, for instance, implementing programs to promote cycling on the way to school (combined with cycling education in school), communication campaigns to inform people about the benefits of an active mobility, or courses to teach riding a bicycle and basic bicycle mechanics.

With respect to the personal security, the publication emphasizes to provide illumination around the cycling infrastructure, as well as to trim trees and bushes if necessary to avoid poorly observable or blind spots. Another possible measure is the installation of emergency devices on street furniture to request police forces in case of emergencies. Furthermore, they suggest to first identify the critical places of robbery or violence (by means of a digital platform), in order to then increase vigilance around these spots especially at night. Simultaneously, it needs tools and mechanisms that facilitate reporting crimes and situations of violence and their pursuit by the police. Closely related to this issue, they propose campaigns to sensitize and provoke a cultural change regarding gender violence, as well as special trainings for the police to raise awareness about the topic and to avoid revictimization.

In order to improve the traffic safety, general traffic calming measures need to be implemented, especially in local streets in the neighborhood where most of women's care mobility takes place, like 30km/h speed limits, speed bumps for cars, or strict speed control. On larger streets a reduction of the car lanes and/or a reduction of the lanes' width can contribute to lower the average speed. Regarding the cycle paths, the guide proposes different types of infrastructure according to the type of street, but preferably segregated and physically protected infrastructure. Also, a proper

illumination at night and a reconfiguration of traffic light phases can increase the traffic safety. Furthermore, they suggest increasing policing and fining, focusing on the protection of vulnerable road users, as well as educational and cultural activities and campaigns to increase awareness and influence mobility decisions.

Finally, regarding women's participation in the labor market, they emphasize the need for a mobility management that considers women's everyday mobility, for instance proposing cycle parking facilities close to people's workplaces, showers, staff bicycles, discounts for the local bicycle sharing system, or more flexible work hours for persons with care responsibilities. Above that, under the same point, they underline the necessity of women's professional participation in mobility and transport related programs, as well as the importance of campaigns and workshops for men to sensitize about gender violence and toxic masculinity.

Women and Urban Cycling (Buenos Aires)

This publication is based on a study conducted in the city of Buenos Aires, that included an analysis of women's mobility patterns and a participatory mapping workshop with women, in which strengths and weaknesses of the local cycling infrastructure have been identified (BID 2017). Based on these results, the publication conclusively formulates eight recommendations that in parts stay rather superficial but include various important aspects (ibid.: 59-66):

- Promote a compact, diverse, and connected urban development to reduce travel distances and to make the bicycle an attractive transport mode.
- Implement a network of separated and physically protected cycle paths, especially in streets with high traffic volume. In local streets of the neighborhood, create shared streets by using traffic calming measures to reduce speeds and interventions to increase cyclists' visibility.
- Promote intermodal traveling by connecting stations of public transport with cycle paths, providing bicycle parking and sharing bicycles at the stations, or by allowing people to transport their bicycles in trains and buses (at least outside of rush hour), or on bike racks outside the buses.
- Extend the system of public sharing bicycles to facilitate a flexible usage of the cycling especially in the areas that concentrate trips.
- Connect policies regarding cycling with an improvement of the public space (illumination, street furniture, tree-planting, pavement, facades, signalization etc.) to make the environment more attractive, create more usage and thus an increased sensation of security.
- Start cycling education with children to teach them riding a bicycle and skills for cycling in the city traffic; complement with courses for adults for learning cycling and basic bicycle mechanics.
- Consider the care mobility especially with children in the design: create cycle paths wide and safe enough to use with children, provide bicycle parking at schools, parks, etc., promote the usage of cargo bikes and adapt the infrastructure to function with them. Create safe neighborhoods that allow children certain independence in their mobility and make the presence of an accompanying person superfluous.
- Influence the behavior of other road users, especially of drivers, by implementing traffic calming measures and educational campaigns, as well as by increasing control.

Access and Gender

The publication by ITDP (Institute for Transportation and Development Policy) and WEDO (Women's Environment and Development Organization) formulate recommendations for including a gender perspective into transport planning, among which some are relevant for women in general, some for the cycling mobility in particular (ITDP/WEDO n.d).

Generally, they emphasize the importance of mixed-use zoning and a permeable urban fabric, as it provides access to services close to the residence, making travel distances shorter and thus allowing women to make most of the trips related to care-work and household by foot or bicycle (ibid.: 19). Regarding the cycling infrastructure, they recommend a network of protected cycle paths, a good demarcation and signalization of cycling spaces, traffic calming measures in case of shared streets, as well as safe cycle parking facilities at transit stations and (public) buildings (ibid.: 18). Furthermore, they point out that fostering the public shared bicycles is a way to provide women with access to bicycles, but that those sharing systems also need to be designed to include women's travel necessities, like having a greater carrying capacity to transport children or groceries (ibid.: 20). With respect to intermodality, they underline the bicycle's role in facilitating trip-chaining or the last-mile mobility (ibid.: 21).

Above that, the publication dedicates a whole section to the topic of education and outreach. They refer to encouraging more women to cycle by implementing car-free days or providing bike riding and repair courses, but also refer to raising awareness for gender violence by starting sensitizing campaigns and by improving the mechanisms for reporting harassment and abuse (ibid.: 22).

Women on a Roll – The 5 Cs of Women's Bicycling

As mentioned before, there are various publications and examples that can be presented here, but there are too many to be discussed in detail each. To close, it is interesting to look at an approach of the League of American Bicyclists (Szczepanski 2013) that does not provide concrete proposals for measures but outlines the crucial aspects in a very compact way by formulating five Cs that are needed to make more women cycle. They condense women's most important needs regarding cycling into five words that can form a general basis for the recommendations for action:

- Comfort – Making biking safe and inviting
- Convenience – Addressing practical realities for women and families
- Confidence – Tools to ensure women feel secure in their skills
- Community – Building connection and cultivating diverse bicycling interests
- Consumer products – bicycle equipment for women and family transportation

6.3 Recommendations for Action for Buenos Aires

After reviewing the claims and critiques of the interviewed women, as well as the existing policies and proposals, this subchapter formulates possible starting points for action in Buenos Aires. As many factors there are impacting the cycling behavior, as many possible starting points for action can be found. The catalogue can be understood as an ideal, best-practice version of the potentials, and identifies possible measures and strategies according to the dimensions and factors that have been used previously to analyze the interviews. This proceeding allows to make the consequences

of the findings from chapter 5 explicit, and to ensure that all relevant factors of impact are being considered.

Table 3: Possible Measures According to the Different Dimensions of Impact (own elaboration)

DIMENSION	IDENTIFIED PROBLEM	POSSIBLE STRATEGIES & MEASURES
URBAN-SPATIAL CONDITIONS	Long travel distances	<ul style="list-style-type: none"> · foster urban decentralization and mixed land-use in the neighborhoods to have schools, shops, services, workplaces etc. close to place of residence · ensure permeability of the urban fabric, decrease urban barriers, create shortcuts for pedestrians and cyclists · improve intermodal connection with public transport (train, subway, busses) · provide e-bike sharing or rental to facilitate traveling longer distances by bicycle
INFRASTRUCTURE	Cycle path network	<ul style="list-style-type: none"> · extension into all parts of the city, especially into the poorer neighborhoods · capacities need to correspond to the (increasing) demand · make sure to reach and connect relevant places: residential neighborhoods, schools, stores, etc. · connect cycle path network with stations of public transport (last-mile transportation by bicycle)
	Cycle paths	<ul style="list-style-type: none"> · widen cycle paths to correspond to the increasing demand and to facilitate overtaking in case of different speeds (for instance when cycling with children) · preferably unidirectional; no cycle path contra-flow of the vehicles · improve signalization for pedestrians and vehicles · improve pavement quality, eradicate potholes, inclined gutters, gullies with gaps parallel to cycling direction; guarantee maintenance · increase policing regarding obstructing vehicles or objects on the cycle paths
	Bicycle parking	<ul style="list-style-type: none"> · secure bicycle parking facilities in schools, workplaces, shops, hospitals, residential buildings and other relevant places · bicycle garages at important mobility hubs (especially at train stations) in the city, optionally providing other services as well

		<p>(toilets, buggy rental, bicycle repair equipment and tools etc.)</p> <ul style="list-style-type: none"> · bicycle racks in public spaces · facilities including spaces for cargo-bikes
	Ecobici	<ul style="list-style-type: none"> · provide stations all over the city, especially in poorer neighborhoods · provide Ecobicis at stations of public transport · increase the number of available bicycles to correspond to the increasing demand · guarantee that bicycles are being maintained and fully functioning · provide additional cargo-bikes, children's bicycles, children's seats, trailers etc.
	Intermodality	<ul style="list-style-type: none"> · provide easy access to all stations of train and subway by ramps and/or sufficiently large elevators (to use with cargo-bike or with children and their bicycles) · more and/or larger boxcars in trains · improve design of railway under- and overpasses and at track crossings to facilitate passing with a bicycle
TRAFFIC	Traffic climate	<ul style="list-style-type: none"> · clear and easy to understand traffic situations (signalization, appropriate and consistent design of infrastructure etc.) · increase consciousness about particularities/requirements of cycling (spacing when overtaking, speeds, breaking distance etc.) especially in drivers of motorized vehicles, e.g. in driving school · increase road user's compliance with traffic rules by publicity campaigns, education and policing
	Traffic safety	<ul style="list-style-type: none"> · improve and expand cycle paths · improve traffic climate · reduction of car traffic and speeds · adaptation of traffic lights, reconfigure the phases · increase women's confidence regarding their abilities and asserting themselves when cycling · publicity campaigns and education regarding possible safety measures for cyclists (helmet, vest, lights, but also hand signals, looking behind before turning etc.)
ACCESSIBILITY	Affordability	<ul style="list-style-type: none"> · politics to make the bicycle a more affordable good (bank credits, regulate the local production and import)

	Ecobici	<ul style="list-style-type: none"> · affordable prices for transporting a bicycle by public transport · foster public bicycle sharing as an alternative to owning a private bicycle, especially in poorer neighborhoods · lower the barriers for registration (without credit card)
TIMES AND OCCASION	Nighttime	<ul style="list-style-type: none"> · provide sufficient illumination along the cycle paths to facilitate seeing at night · improve (perceived) security
ABILITIES	Riding a bicycle	<ul style="list-style-type: none"> · teach riding a bicycle as part of traffic education in school · courses to teach riding a bicycle to adults · increase visibility of adults who do not know how to cycle to lower the sensation of embarrassment while simultaneously increasing the visibility of those courses · women-only courses to provide a safe space, with options to offer childcare during the time of the course
	Safe cycling	<ul style="list-style-type: none"> · traffic and cycling education in schools (with practical parts) · publicity campaigns, and courses for adults
	Maintenance	<ul style="list-style-type: none"> · courses or manuals for basic maintenance/reparation skills
SOCIO-CULTURAL SETTING	Mobility culture	<ul style="list-style-type: none"> · education to change the public perspective on mobility behaviors and different transport modes · depict the bicycle as a mode of transport rather than as a recreative or sport tool · take measures and apply regulations that complicate the usage of cars but favor cycling and walking · integrate more women into transport-related working positions to decrease men's dominance in the field
	Social	<ul style="list-style-type: none"> · increase visibility of cycling women as role models, for instance through publicity campaigns or events to challenge images of cycling being for boys/men and normalizing seeing cycling women · in doing so, represent a broad variety of different women: older-younger, mothers with children, commuters, trans women, women of

		<p>different physical appearance (body forms, skin tones etc.)</p> <ul style="list-style-type: none"> · create encounters between cycling and non-cycling women · facilities to shower/change in workplaces · increase visibility of “feminine” looking or formally dressed cyclists
SECURITY	<p>Personal security</p> <p>Sexual harassment</p> <p>Bicycle theft</p>	<ul style="list-style-type: none"> · illumination along the cycle paths and at Ecobici stations · project cycle paths on busy streets with multiple uses on ground floors (also at night) · ensure open lines of sight in public space, avoid dark corners, or bushes and trees blocking the sight · education about diversity to create awareness and break with machismo · sensitize the public to the issue and encourage people to stand up against harassment and violence · foster and facilitate the report of cases, penalize any form of sexual harassment · improve bicycle parking facilities and availability of Ecobici · make bicycles more affordable for most people; increase supply
ORGANIZATION	<p>Activities and schedules</p> <p>Transporting goods</p> <p>Traveling with children</p>	<ul style="list-style-type: none"> · decentralization and mixed land use to keep distances for most activities short · improve intermodal connectivity for longer distances · foster the usage of cargo-bikes · provide cargo-bikes, baskets, or trailers for Ecobici · provide recommendations and tips for how to organize care mobility by bicycle; create an exchange between cycling and non-cycling parents · improve cycle paths and traffic safety · provide bicycles/equipment that facilitates travelling with children using Ecobici
EMOTIONS	<p>Negative feelings and associations especially among non and infrequent users</p>	<ul style="list-style-type: none"> · create positive experiences for cycling beginners through events as well as in cycling courses · in educational campaigns, take care to not create more fear regarding traffic safety · emphasize publicity campaigns on the sensation of joy and freedom

MOTIVATIONS	<ul style="list-style-type: none"> when promoting cycling, focus communication on practical benefits (saving money, staying fit, travel independently/flexibly) rather than on abstract aspects like sustainability
PANDEMIC	<ul style="list-style-type: none"> see the pandemic as an opportunity for long-term change motivate new users to continue and make cycling a habit by improving overall cycling conditions/commodity

In short, the city of Buenos Aires still has some potentials to make cycling more attractive for women. One focus should be on extending and improving the bicycle infrastructure taking into account the mentioned criteria. Especially, the great potential of Ecobici needs to be emphasized as it can tackle various of the barriers simultaneously by extending and adapting the existing system. Furthermore, educational and promotional campaigns can create awareness and carry forward changes in the mobility culture and gender norms.

6.4 Advances in Buenos Aires

After presenting the potentials Buenos Aires has to make cycling more comfortable and convenient for women, this subchapter takes a brief look at where the city currently stands and what it projects for future developments.

In the *Climate Action Plan 2050* (Buenos Aires Ciudad 2020a: 69), the city already formulated some general goals regarding the promotion of cycling. Those include the expansion of the network of cycle paths, the creation of metropolitan cycle lanes, the extension of the Ecobici system, the provision of a bicycle parking network, interest-free financing for the purchase of bicycles, the improvement of the intermodality, as well as the promotion of sustainable mobility plans in companies. Although these goals do not explicitly consider a gender perspective, the general objective of improving the cycling conditions and infrastructure coincides with the potentials presented in 6.3, as it certainly would facilitate cycling for women as well.

As mentioned before (see 3.3), Buenos Aires is also already taking steps in the direction of including a gender perspective in the transport and mobility planning. While the *Gender and Mobility Plan* from 2019 only provided a general framework, the recently published *Methodological Guide for Mobility Planning and Design with Gender Perspective* from June 2021 specifies concrete methods and measures to apply. According to the city's government, they want to achieve that "women continue to appropriate the streets, without having to plan their mobility in relation to any symbolic or physical barriers" (Buenos Aires Ciudad 2021: 4). Although the collected actions in the annex are only meant to be exemplary and do not constitute an actual action plan (ibid.: 166), they still give an insight into what one might expect from the city's future policies. Regarding cycling mobility, the potential actions refer to the cycle paths and the public shared bicycles. However, the proposals go beyond mere infrastructural measures and include cycling courses, sensitizing and promotional campaigns etc. that create a list of measures similar to the one elaborated above.

All in all, in Buenos Aires there are already some mobility-related policies, plans and strategies that explicitly consider a gender perspective, or at least have the potential to also facilitate cycling for

women. Especially the list of exemplary measures in the most recent publication gives ground for optimism that the city is on a good path to make cycling more comfortable and attractive for women – but only if these measures do not stay exemplary but become implemented in practice. However, there seems to be a public will, and the current state provides a good basis to start improving and tackling the situation – whether regarding the cycle paths and Ecobici infrastructure, or regarding the broad civil society commitment in activist groups that already take action in educating and sensitizing.

7. FINAL CONSIDERATIONS

Being a woman still comes along with many injustices and discriminations. Creating gender equality is one of the biggest social challenges confronting our societies, and the UN defined it as one of their 17 sustainable development goals. Although this issue goes beyond the scope of what urban and traffic planning can effectuate, they can still make a contribution. Mobility is a crucial point in the struggle for more gender equality: It gives people access to basic services, education, social and political participation, and economic independence.

Hence, cities need to guarantee that women have the same opportunities and the same freedom than men regarding their mobility. The bicycle can be a central tool in this task due to being an individual, flexible, independent and relatively economic mode of transport, and due to the benefits it has for the individual health and wellbeing, the city and urban traffic, and the environment. However, currently there are certain conditions and circumstances that complicate or impede women's mobility by bicycle – but many of them can be tackled by implementing and adapting urban infrastructure, improving public spaces, and initiating educational campaigns.

In this framework, this thesis could contribute to obtain a better understanding of the barriers and challenges women in Buenos Aires face in their everyday mobility and when cycling. With its approach and the applied methods, it achieved to answer the posed research question, asking for the reasons that make women use the bicycle less frequently than men, and searching for potential starting points to reduce the hindering factors.

Although this work looks at mobility and cycling from a women's point of view, the results and further conclusions are not only relevant for women. For instance, traffic safety concerns everyone, independently of the transport modes one might prefer – but especially the community of cyclists, pedestrians or other vulnerable road users would benefit from adaptations in the traffic infrastructure and a better traffic climate.

However, continuing this line of thought, the application of an intersectional approach in future research could be fruitful to get a deeper understanding of the overlapping social dimensions in the mobility behavior, and their relationship with cycling. In the case of Buenos Aires, a comparative study of men's and women's perspectives could be a meaningful continuation of this work, as well as a quantitative study investigating the degrees of relevance of the different factors in women's decision taking to cycle. Considering the formulated hypothesis that more gender equality fosters women's participation in cycling, it could be interesting to prove that by comparing mobility data with gender equality indices.

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