



Mobilities of the Multiply Marginalized in Munich

Unraveling Intersectional Vulnerabilities Shaping Women's Safety in Public Transport

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This thesis seeks to unravel how safety, or its absence, influences the daily mobility of intersectionally marginalized women in public transport in Munich. I aim to make visible in which situations women consider themselves at risk of verbal or physical harassment and use this information to explore how far these insights are problematized in the mobility planning concerned with transitioning Munich into a socially just mobility space. For this, I employed a two-stage research process. First, I gathered data on the experiences of intersectionally marginalized women with mobility diaries, go-alongs and semi-structured interviews. Second, I conducted two focus groups, one with a mobility strategist of the city of Munich and a mobility researcher of its public transport subsidiary and another with two tram drivers. The results of this research process show that intersectional marginalization significantly shapes women's experiences of safety in Munich's public transport, influencing their perceptions, strategies, and general sense of security. In addition, intersectional issues related to safety, as identified in the first part of the study, are only partially reflected in the current mobility planning strategies and practices of the city of Munich. Thus, this study offers valuable insights into the experiences of intersectionally marginalized women and mobility planners' response thereon.

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1 Mobilities of the Multiply Marginalized in Munich

Almost daily, I find myself navigating through the webs of Munich's public transport system. My journey unfolds as more than just a commuter traversing from station to station: as a woman with an apparent Turkish migration background who, in addition, is wearing the Muslim veil, a hijab, each of my steps is accompanied by cautionary tales from family and friends: "Do not stand too close to the train rails, what if someone pushes you?", "Have you heard about the Muslim mother with a stroller, who has been shoved in front of the tram in the inner city?", "Well, in your place, I would only be commuting by car." In this way, Munich's public transport infrastructure turned into a landscape, where narrations of safety, and its absence, has been a constant companion, one that I intend to unravel in this thesis.

These personal stories underscore the urgency of understanding the intersectionality inherent in mobility, that also shapes experiences of (a lack of) safety in public transport. It is within these narratives that the *Mobilitätsstrategie 2035*, Munich's roadmap for a more inclusive and sustainable urban mobility, gains a profound resonance. The strategy declares a dedicated focus on gender-equitable mobility, emphasizing the need for transportation systems that not only efficiently move people but also cater to the diverse experiences and needs of its inhabitants (Mobilitätsreferat München, 2021). This commitment raises critical questions about the intersectionality of mobility, delving into the complex interplay of gender, sexuality, ethnicity, nationality, and racialization particularly concerning the safety experiences of women in public transport. This research seeks to unravel how safety, or lack of it, influences the daily public transport mobility behaviors of women. More than a documentation of challenges, this exploration is a critical assessment of the integration thereof into the fabric of Munich's mobility planning and practices. My goal is to contribute valuable insights that bridge the lived experiences of women with the aspirations of urban mobility planners.

Rooted in the rich fields of feminist geography, mobility studies, and feminist and postcolonial science and technology studies (STS), the theoretical framework of this investigation acknowledges mobility not merely as a logistical puzzle but as a spatial mechanism entangled with social inequalities. The lens of mobility justice recognizes that the ability to move freely is not universal; it is shaped by power structures and social categories (Sheller, 2018). By acknowledging that mobilities become spatial mechanisms through which social inequalities are (re)produced (Butz & Cook, 2018), this research is concerned with looking at uneven mobilities and the way in which categories like gender, age, class, and *race* cut across these distributions of mobility. Furthermore, the significance of safety in women's mode choice for urban mobility, as highlighted by Kawgan-Kagan & Popp (2018), underscores the need to explore the nuanced experiences of vulnerability and fear that may limit women's movement in public spaces. This notion prompts to position the sense of security as a critical dimension of accessibility to mobility,

drawing inspiration from Church et al.'s (2000) concept of fear-based exclusion and Kaufmann et al.'s (2004) notion of motility based on access, competence, and appropriation. Borrowing from Haraway's (1988) situated knowledge will help in understanding how all accounts on this topic are embedded in the conditions in which they are produced, combined with Seamon's (1980) notion of the place-ballet that additionally stresses the co-production of mobility through the relationship of the moving body and its environment. In this line, Davidson's (2021) rhizomatic understanding of mobility, where justice and sustainability are immanent to mobility itself, enable an unraveling of what kind of worlds mobility configures and is configured by.

As I delve into these entanglements with intersectionality of gender with other characteristics in the context of mobility, my intent is to contribute to the ongoing discussion on mobility justice, shedding light on the ways in which these categories intersect and cut across the distribution of mobility. For that purpose, I want to make visible in which situations multiply marginalized women consider themselves at risk of verbal or physical harassment and use this information to explore how far these insights are problematized in the mobility planning concerned with transitioning Munich into a socially just mobility space. To systematically approach this exploration, I choose a sequential two-stage research process.

First, I reveal the experiences of safety for intersectionally marginalized women. I study their subjective experiences by shedding light on the lived realities and challenges they face in the context of urban mobility in Munich. Therefore, my first research question is:

RQ 1: How do intersectionally marginalized women experience safety during their day-to-day mobility on public transport in Munich?

This question seamlessly transitions to the second stage of my research, linking the findings from the first part to the broader context of urban planning in Munich. Here, I aim to understand how the identified issues and experiences of intersectionally marginalized women are acknowledged or addressed within the existing mobility planning strategies and practices in Munich. Hence, the second research question is:

RQ 2: In how far are intersectional issues related to safety, as identified in the first part of the study, reflected in the current mobility planning strategies and practices of the city of Munich?

Accordingly, this thesis begins with a literature review that works out the gaps in intersectional urban mobility research and presents the concepts from STS on which I draw to address this gap. Then, I explain my methodology and the respective research designs for both stages, a multi-method approach including mobility diaries, go-alongs, and semi-structured interviews for RQ1 and focus groups and additional personal communication for RQ2. Then, I present the results for both parts. For the first part, I present the experiences of intersectionally marginalized women in their day-to-day public transport mobility; in the second part, I present the findings from the focus groups based on the results from the first research stage. In the discussion part, I loop these

findings back to my research questions, examine (future) relevance of the findings, and consider limitations and potential avenues for follow-up research.

2 Theoretical Foundations of Intersectional and Gendered Safety in Public Transport

In the following section I will present the research underlying the relevance of my research as well as the concepts used to later interpret my findings. First, I present current research on the importance of mobility justice with special regard to gender and additional forms of discrimination and (sense of) safety in public transport as well as the need for intersectional mobility planning. Second, I will elaborate on the STS and mobility studies literature informing the conceptual lens for my study.

2.1 Mobility Justice: Gendered Dynamics and Safety Implications

Initially, I will show the importance of mobility justice in terms of gendered mobility and consequences thereof for safety as an exclusion factor in public transport mobility as well as the importance of considering intersectional perspectives for the topic of public transport and mobility planning.

Here, it is important to note that mobility justice is understood as one of our day's crucial political and ethical issues (Sheller, 2018b). It is defined as “an overarching concept for thinking about how power and inequality inform the governance and control of movement, shaping the patterns of unequal mobility and immobility in the circulation of people, resources, and information” (Sheller, 2018a, p. 14). Over the years, mobility justice has been one of the most prominent themes in mobility research and planning, with scholars from various disciplines contributing to this notion, including feminist and postcolonial STS, feminist geography, and mobility studies.

To understand mobility justice, it is important to recognize in which ways the inequality in mobility is formed by spatial mechanisms that reflect and produce social inequality (Cook & Butz, 2018). These (im)mobilities or uneven mobilities are produced in the way that class, gender, *race*, ethnicity, nationality, sexual identity, and physical ability enact embodied differences corresponding to the existing mobility systems. While many factors lead to uneven mobilities, the most important one for this thesis is the consequences created by the varying degrees of comfort and safety in public transport mobility for different people. This variable does not simply refer to explicit notions on who has access to a specific means of transport and who does not but instead refers to implicit forms of segregation due to conditions impeding a group's use of a means of movement while easing the other's use (Sheller, 2018b). To better grasp this notion, it is important to begin with the understanding that space and mobility are gendered through and through (Davidson, 2022). This will be further elaborated in the following section.

2.1.1 Intertwinement of Mobility and Gender

Mobility choices, mobility behavior, perceptions of mobility, and experiences of mobility are inherently gendered, as they are structured by the gendered activity patterns in time and space, the gendered access to resources and the gendered experiences of embodiment in public space (Law, 1999). Currently, this public space is predominantly shaped by men. Despite being the most pedestrians and public transport users in practically every city worldwide, women have not yet had the opportunity to create and impact urban settings (Souza et al., 2018). Thus, the current city results from a power relationship belonging to men politically, socially, and historically, created when women were easily excluded from space (Souza et al., 2018). This space is not a static site, it is organized by various factors, including its physical infrastructure, time, and other people's presence. In this setting, inclusivity, access, and safety are produced and negotiated in the interaction of space and people (Beebeejaun, 2017).

Reimagining space as socially formed and evaluative enables a more differentiated approach to mobility politics and access. As described, mobility not only reflects existing gendered power structures but further reinforces those. Thus, the question is no longer where the unequal distribution of movement lies and who has more control over their mobility. Rather, it is about how a group's mobility negatively affects and debilitates others. In short, unequal mobility weakens those already weaker in society (Massey, 1994). Knowing this is an essential basis for understanding that redesigning cities will not suffice in the long-term unless we reform power dynamics and, as a result, gender inequity in our communities. Social exclusion from mobility cannot be addressed as a solely transport-focused agenda but needs to consider further socially responsible policies in, for example, land use, housing, health, education and welfare (Lucas, 2012). When space, mobility, and access are conceptualized more imaginatively, more inventive and encompassing solutions to do so might arise (Massey, 1996).

2.1.2 Safety as an Exclusion Factor

I have already established, that people can be confronted with uneven access to movement up until immobility based on their individual positioning in the hierarchy of resources and power (Lubitow et al., 2020). In the following, I will show the importance of (sense of) safety for access to public transport mobility.

Safety is one of the factors shaping space and mobility while a sense of security is also indefinitely created by the distinct mobility environment. Using this mobilities perspective shows how experiences are shaped by their mobile setting and how crimes such as sexual harassment, hate crime, and robbery are co-produced in the mobile environment (Lewis et al., 2021). In their work on Sustainability and Gender, Kawgan-Kagan and Popp (2018) have shown that safety is a significant factor in women's mode choice for urban mobility, proving that there are gender-based hurdles potentially limiting movement (Kawgan-Kagan & Popp, 2018). Similarly, the fear of anti-

LGBTQ+ discrimination and violence has a significant impact on LGBTQ+ individual's travel and participation options (Weintrob et al., 2021). The ability to move freely in public spaces without fear of physical or verbal attack has material and symbolic importance for women, ethnic and religious minorities, and LGBTQ+ communities in specific contexts (Beebeejaun, 2017; Levy, 2019). Denying this freedom creates a separation through the metaphorical notion of divided, female-only spheres, and at times practices of actual, material geography of exclusion enforces women's second-class status. At the same time, male privilege to space is reinforced by limiting women's movements and constraining their access to different spaces (Kern, 2021).

This may lead to women's sense of safety becoming an exclusion tactic, which is specifically noteworthy as research found that women are more worried about being harassed and violated outside their homes, even though they are statistically more likely to experience violence by men in their own homes (Ceccato, 2014; Pain, 1997). In addition, Lubitow et al. (2020) describe that even though men are more likely than women to be victims of violent crime, excluding rape and assault, women report more frequent and intense fears of victimization. This fearfulness is not an inborn characteristic of women; it becomes socially constructed through parental warnings in childhood lessons about danger, discussions among friends, and confrontations with calls to caution due to their peer's lived experiences of thefts and physical and sexual harassment in public (Boys, 2022; Koskella, 1997; Levy, 2019). Furthermore, specific situations in women's mobility become linked to the construction of feelings and meanings with time, meaning that something like lonely underpasses that are poorly lit and exposure to warnings from family members is interconnected with women's judgment of (un)safety (Farina et al., 2022). However, this is not a sufficient explanation for the increased fear of violence from strangers. This focus on strangers is explained through women's need to minimize risk and its effects on social relationships. Centering fear on strangers facilitates interactions in daily life (Pain, 1997).

As a result, this gendered sense of safety and consequent restrictions to access to public space and mobility signify asymmetric power relations. The fact that girls are socialized off the streets, while boys are socialized to take the room on the streets creates structures that shape space and women's power to claim it – or not (Boys, 2022; Lubitow et al., 2020). The construction of the female body as fearful contains their bodies through shrinking them or projecting the expectation on them of withdrawing from a world that is supposed to be dangerous for them. Safety becomes a question of not occupying public space or, more commonly, of not traveling through it alone. This creates a politics of mobility, where, once more, the mobility of certain bodies entails and even necessitates the restriction of others (Ahmed, 2012).

Therefore, claiming space becomes an act of political meaning. When women show confidence in the public and “write themselves onto the street” (Koskella, 1997, p. 316), they appropriate urban space for themselves and other women. Their mere presence in the public creates space more available to others due to conveying security by familiarity. This extends

beyond gender to ethnic and religious groups. Research in Brooklyn, for example, discovered that Muslim women found specific settings more welcoming if there was a mix of ethnic groups and families and places where they would encounter other women wearing the headscarf (Johnson & Miles, 2014). Thus, the perceived gendered and ethnic clustering in public space challenges how privileges or belonging are conveyed in confrontation with other city users (Beebeejaun, 2017).

However, when women accept their need for additional protection because of gender roles, they inevitably end up endorsing their unprivileged position created by the existing power structures (Pedersen, 2020). Therefore, the sociocultural aspects of safety and security in public space and transport become essential in analyzing how justice is negotiated across transport spaces, including modes, routes to those modes, and waiting hubs.

2.1.3 Empirical Findings on Safety in Public Transport

To understand the socio-cultural factors, structural inequalities, urban environments, and community dynamics shaping sense of safety, I will look at empirical studies concerning women's sense of security in public spaces and transport. This will help in exploring what impacts discrimination, racism, religious bias, ageism, and other forms of oppression have on women's sense of safety and their resulting access to public transport. My focus is on public transport as there is global proof that harassment and following fear of crime may increase car use over public transport use, therefore undermining efforts to increase public transport use for environmental sustainability (Gardner et al., 2017).

There is an existing body of research on this topic across the globe concerned with reasons for (un)safety, effects of feeling unsafe, perceived perpetrators, as well as personal and suggested measures to improve sense of safety in public transport. Here it is important to note that in the majority of this literature in mobility research, intersectional marginalization mechanisms are not taken into account, they rather focus on gendered forms of marginalization.

In this line, I want to first comprehend which are concrete reasons for women to feel unsafe in public transport. Here, in one instance, researchers Yavuz & Welch (2010) used data from the Chicago Transit Authority Customer Satisfaction Survey of 2003 to understand whether there are gender differences in train transit security practices and services in Chicago, USA. Their findings showed that women's sense of vulnerability increased when there was no one to bear witness to potential crimes and they were most concerned about social incivilities (Yavuz & Welch, 2010). Another research by Lewis et al. (2021) from London, UK, on sexual harassment of women showed that the dynamics of the city at certain times and the infrastructures of the underground tube enabled and covered certain forms of violation. Specifically, during rush hour, the number of people in an enclosed space facilitated embodied and physical acts of sexual violence like frotteurism and groping (Lewis et al., 2021). Thus, women are more fearful due to specific mobility environments over others, specifically when they feel more vulnerable to victimization than others

due to further marginalizing characteristics, leading to more distinct safety needs (Loukaitou-Sideris, 2014).

In addition, it is essential to note that the effects of safety-related problems were more long-lasting for women than men (Yavuz & Welch, 2010). Stark & Meschik (2018) confirm that living through frightening experience had a restricting effect on women's travel behavior with two surveys conducted in Austria in 2012 and 2013. The results show that women generally have constrained travel behavior due to fear of security. However, their travel behavior became further constrained after experiencing frightening situations such as verbal harassment, intimidation, assaults, and physical violence up to (attempted) rapes (Stark & Meschik, 2018).

Hence, the question arises: Who are commuters afraid of, and who are the perpetrators? A study on mobility in Brasília showed that women were insecure in public spaces due to the exclusive presence of men. Regardless of their further features, such as culture, ethnicity, social class, or age, women were anxious and felt driven to change their paths once they only encountered men on their routes (Souza et al., 2018). In the public transport context, a gender-based study by Lubitow et al. (2020) from Portland found that the potential perpetrators were not only fellow passengers. Instead, transgender and gender-nonconforming public transport users were continuously experiencing discrimination by public transport employees and staff, general members of the public passing by stops and platforms, as well as other passengers (Lubitow et al., 2020).

However, there is a high level of underreporting as experiencing discrimination and harassment barely leads to official reporting and, thereof, a distorted reflection thereof in crime statistics (Gardner et al., 2017). Furthermore, women who experience sexual harassment tend not to respond at the moment, as they try to preserve their fellow passengers' trajectories by avoiding their attention mainly due to fear of embarrassment and lack of support, abiding by an implicit code of conduct protecting the sociabilities in public transport (Lewis et al., 2021; Lubitow et al., 2020).

Rather than asking for help, women tend to respond to the risk of crime in public transport through a bouquet of personal strategies. One form of strategy is avoidance, including avoiding traveling at certain times of day to certain places by specific modes of transport, traveling by themselves, or even avoiding traveling altogether, as shown by participants in studies in Bogotá, Colombia, and El Alto, Bolivia (Kash, 2019) and Austria (Stark & Meschik, 2018). In Recife, Brasil, and Brussels, Belgium, participants also employed additional strategies for travels at night, like extensive planning, preparation, and drawing from (non-)financial resources (Farina et al., 2022). Similarly, another strategy is choosing more expensive travel modes, such as taxis, or taking longer routes they perceive as safer (Kash, 2019; Weintrob et al., 2021). Moreover, women engage in defensive behaviors like appropriating more protected positions, like choosing a seat within the bus they perceive as safe, generally near the driver, or against a barrier such as a wall

or standing near “safe” people, often other women or elderly people (Kash, 2019). They might also adopt more active measures like going to self-defense training or using deterrents such as objects to shield themselves or usable as potential weapons (Kash, 2019; Stark & Meschik, 2018). Besides those strategies applicable to all women, trans and queer women might cope with the strategy of changing their “passing” as non-trans and non-queer, effectively meaning that they would aim to hide their identity in order to remain unidentified in public transport (Weintrob et al., 2021).

Regarding suggested mobility planning strategies for safety, there is a wide range of potential solutions to reduce harassment and women’s fear of crime. With this, the solutions must be thought with a whole journey approach, meaning that each step towards public transport, including walking there, waiting, and riding the mode of transport, must be considered (Levin & Faith-Ell, 2019). Here, the researchers Yavuz and Welch’s (2010) findings indicated that video surveillance had a lower effect on women’s feelings of safety than on men. While environmental interventions such as video surveillance are popular with mobility planners to deter crime and improve security, they seem to have a limited effect on improving women’s sense of safety. In comparison, personnel surveillance through police or security employees was evaluated to be more effective (Gardner et al., 2017; Loukaitou-Sideris, 2014; Pedersen, 2020).

Other design strategies like visibility due to good lighting along platforms and stations and clean environments (Pedersen, 2020), as well as reduction of crowding (Kash, 2019), proved to be effective measures to ease women’s fear. Women also value education and outreach to create public awareness of violence in public transport. These campaigns might empower women and thus reduce fear (Gardner et al., 2017; Loukaitou-Sideris, 2014; Pedersen, 2020). Additionally, it was suggested that advertisements showing sexualized content should be avoided near public transport infrastructure (Levin & Faith-Ell, 2019). A significant factor in women’s sense of safety was the presence of others, specifically concerning their likelihood of intervening in harassment and discrimination (Farina et al., 2022; Kash, 2019). Women also particularly appreciated driver’s refusal to let intoxicated individuals on board (Pedersen, 2020). Furthermore, research has found that improved reporting mechanisms benefit women’s sense of safety (Gardner et al., 2017; Kash, 2019).

2.1.4 Importance of Intersectional Perspective on Safety in Public Transport

These findings, drawn from existing research, offer insights into how women in different cities experience and navigate feelings of unsafety. Yet, it is important to acknowledge that people have varying needs based on further characteristics and it must be ensured that the mobility needs of every person are met regardless thereof (Pedersen, 2020). This begs the question of how social actors are positioned in relation to (im)mobilities by their inherent characteristics and what the effects of this are in the political realm, which is why the field of mobility studies has been attentive to considering how uneven mobilities are shaped by characteristics such as gender, age, class,

and *race* (Lubitow et al., 2020), with a growing body of research on this topic. However, one critique comes from queer studies, stressing that the scholarship of mobility studies must also appraise the distinct needs of queer people and their mobilities on the urban scale. It is important to include considerations based on the intersections of social differences to further advance mobility justice. Here, it is crucial to gain a deeper insight into whether and how queer people can enter spaces and where there are limitations to their entrance, even more so when safety or their perception thereof is one of the factors hampering their power to claim space (Nash et al., 2018). Similarly, racialized people's mobility is equally affected by embodied practices of racialization (Enright, 2019), which is shaped by unequal power of certain groups in particular contexts and encounters, leading to unequal access of racialized people to movement (Nicholson & Sheller, 2016). Analogously, migrants also need additional attention. It is crucial to note that mobility is a skill that needs to be learned and adapted to new environments. Migrants must learn to become mobile in a new setting once they move into a new place. This paves the way to consider to what extent migrants have a variegated form of mobility and how their urban mobility can be linked to integration (Buhr & McGarrigle, 2017). In this line, Masoumi & Fastenmeier (2016) suggest a special attention to the differences between racial, religious, and sexual minorities and the majority of citizens in Germany concerning sense of safety in public transport vehicles, stations, and the roads leading to stations via neighborhoods (Masoumi & Fastenmeier, 2016).

In reviewing this existing literature, it becomes evident that while considerable research has been conducted on sense of safety of women in public transport, there exists a discernible gap in our understanding of how other characteristics shaping mobility, as described above, additionally shape intersectionally marginalized women's sense of safety in public transport. This highlights the importance for my first research question, which explores the day-to-day public transport mobility experiences of intersectionally marginalized women in Munich. Specifically, my study will delve into the broad intersectional dimension of safety, distinguishing it from existing research on sense of safety in public transport that often concentrates solely on gendered experiences. It is crucial to note that while these findings provide a foundation, my research uniquely emphasizes the interconnectedness of various social identities in understanding women's safety. Adopting an intersectional lens while analyzing this issue is essential as only this lens enables us to consider the multiplicity of influences that enable the oppressive conditions of marginalized people.

2.1.5 Importance of Intersectional Mobility Planning

Moving from the experiences in public transport raises the question of how mobility planning might respond to those. Current research shows that so far, the topic of gender mainstreaming has gained international traction in transport policy. However, this approach to policy planning has been criticized both for its simplification of gender, as well as its prioritization of gender over all other factors (Bridgman et al., 2022). Here, the concept of intersectionality is capable of

addressing the weaknesses of gender mainstreaming by bringing a much-needed multiplicity in attempting to recognize how the intersections of gender, *race*, ethnicity, class, ability, age, and sexuality shape mobility (Lacey et al., 2021).

In practice, Haas' (2022) research on the ongoing debates on ecologically sustainable mobility transformation in Germany, the so-called Verkehrswende, concluded that while issues concerning mobility justice are implicitly mediated, the dominant political actors marginalized explicit negotiations of mobility justice (Haas, 2022). In addition, on the global scale, discussions on queering of urban planning are limited to only preliminary transformative initiatives (Bain & Podmore, 2023). This shows that the current mobility planning practices are still lacking a focus on transformative change. In this line, Levy (2009) stresses the challenge for planners to rather focus on addressing sources of exclusion and oppression than to prioritize recognition at the expense of aiming for equality. Through this, gender justice and justice for all identity groups can be incorporated for progressive and transformative social change (Levy, 2009).

In these times in which Munich is still working on their mobility strategies' sub-strategies, it is crucial to understand to what extent intersectional justice and a diversity approach already play a role in the city's mobility planning in terms of safety. Only by thoroughly engaging with the complexity of intersectionally marginalized women's experiences and reflecting these experiences in mobility planning and practices it could become possible to build on the advances made by gender mainstreaming towards more inclusive transport planning; thus, creating fair transport services with minimized social exclusion of vulnerable groups. This highlights the importance for my second research question, namely in how far intersectional issues related to safety are reflected in the current mobility planning strategies and practices of Munich.

2.2 Concepts: Intersectionality, Situated Knowledges, Place-Ballet, Rhizomatic Mobility and Access

In this section, I explain my understandings of the key theoretical frameworks that inform my research and will help in answering the research questions as posed above. I explore the theories and concepts of intersectionality, situated knowledges, place-ballet, rhizomatic mobility, and access, and how I will use these concepts to interpret my findings.

2.2.1 Intersectionality

I will first define my understanding of the word intersectional. The term intersectionality was first mentioned by legal scholar Crenshaw in 1989 based on the notion that using a single-issue approach to discrimination resulted in the systemic exclusion of intersecting discrimination in court (Crenshaw, 1989). In this line, activist blogs such as Womankind define intersectionality as "the concept that all oppression is linked. (...) Intersectionality is the acknowledgment that everyone has unique experiences of discrimination and oppression. We must consider everything and anything that can marginalize people – gender, *race*, class, sexual orientation, physical ability,

etc.” (Taylor, 2019). Similarly, LGBTQ Intersect defines Intersectionality as “an analytic framework that addresses how interlocking systems of power impact those who are most marginalized in society,” referring to discrimination due to gender, *race*, religion, gender identity, sexual orientation, and other identities (LGBTQ Intersect, n.d.).

There is various critique on this concept, such as recent controversial debates in Germany on whether intersectional feminism foregrounds categories of *race* and gender over class and antisemitism (Varela, María do Mar Castro & Dhawan, 2022). In this line, activist Jawabreh writes: “The fact that the category of “class” appears as one arbitrary category among many leads to further disorientation. Social relations are individualized to establish a structural concept that in turn simply adds up all individuals” (Jawabreh, 2022).

On a similar note, Nash (2008) criticizes approaches such as the categorical approach to complexity as coined by McCall in 2005: This refers to an approach in intersectionality studies that focuses on the complexity within single social groups or categories. It starts with a unified intersectional core, such as a single social group, event, or concept. It works outward to analytically unravel the influences of gender, *race*, class, etc., one by one. This approach acknowledges the diversity and heterogeneity within a group and is often used to contrast this group with more standard groups that have been the subject of previous studies (McCall, 2005). Nash (2008) criticizes this approach, stating that it fails to follow the disruptive nature of the intersectionality concept and instead views identity as cumulative (i.e., *race* + gender + sexuality + class = complex identity), thus replicating the social processes intersectionality was meant to critique (Nash, 2008).

Acknowledging that the intersectional identity is not an additive one but instead focusing on how the intersectional persona comes to be through the women’s various characteristics, I will try to bypass this assessment. In this way, intersectionality will become a lens to observe and analyze marginalization and an instrument to overcome those downfalls altogether rather than replicating the critiqued approaches.

2.2.2 Situated Knowledges in Mobility and the Place-Ballet

For this intersectionality approach, my analysis will mainly rely on Haraway’s concept of situated knowledges (Haraway, 1988), which provides a comprehensive perspective on the interrelations between epistemology, ontology, ethics, and politics. Epistemologically, situated knowledges encourages thinking beyond an understanding of the objectivity-relativism duality, as both are seen as inadequate. The first is objectivity, which Haraway understands as performing the “god trick” (Haraway, 1988, p. 589) and assuming a “view from above, from nowhere” (Haraway, 1988, p. 589). This approach hides behind an angle of neutrality and renders other positions invalid while encompassing the specific stance of the privileged. Meanwhile, the second approach, relativism, according to Haraway denies any claim of objectivity and assumes all viewpoints are equally constructed. As an alternative, situated knowledges is supposed to preserve objectivity to

provide a theory of the world that enables the establishment of feminist ethics and political concerns. It understands how perspectives are formed and how transient they are, but it refuses to accept the consequences that everything is merely a question of opinion. Thus, situated knowledge works as a substantial apparatus for producing more adequate accounts of the world by becoming conscious of how all forms of knowledge are not only embedded in but significantly affected by the conditions in which they are produced. Haraway utilizes the metaphor of vision to counteract the god trick, which presumes a “conquering gaze from nowhere” (Haraway, 1988, p. 581). In demarcation to this, the vision is embodied in semiotic-material conditions, partial, incomplete, and accountable for the contents and ways the observed is actively organized. Hence, vision and, with this, situated knowledges, demand a practice of positioning in the processes of knowledge production by answering questions like, “How to see? Where to see from? What limits to vision?” (Haraway, 1988, p. 587). By producing knowledge through active vision, situated knowledges also acts as an “apparatus of bodily production” (Haraway, 1988, p. 595) in which bodies are material-semiotic objects of knowledge drawn by boundaries materializing in social interaction. In the context of urban mobility, Haraway's concept of situated knowledges gains particular significance as it helps encourage a paradigm shift that acknowledges the diverse and intersectional experiences of marginalized women navigating urban spaces, challenging traditional perspectives, and introducing a more inclusive understanding of their individual lived realities.

On a similar note, the phenomenologist Seamon (1980) introduces the term “place-ballet”, which describes the “interaction of individual bodily routines rooted in a particular environment, which often becomes an important place of interpersonal and communal exchange, meaning, and attachment”, stressing the co-production of mobility through the relationship of the moving body and its environment.

Combining phenomenology and Donna Haraway's concept of situated knowledges offers a nuanced approach to understanding how intersectionally marginalized women navigate their surroundings and contribute to knowledge production. This approach will help to show that the participants' knowledges do not emerge in a vacuum, but instead are shaped by their individual and contextualized experiences and personal relations to mobility. This includes questions of how the spokespeople in my research view mobility practices, how they adapt safety knowledge and contrast it to their personal experiences, which information they view as granted, and how they finally position themselves in the conversation on women's sense of safety in public transport.

2.2.3 Rhizomatic Understanding of Mobility

These conversations are based on the underlying assumptions for mobility in this thesis which is a rhizomatic understanding of mobility. Davidson (2021) draws from material and radical black feminist thought to introduce this new rhizomatic understanding of mobility as the material-semiotic transformation of energy that refuses binary divisions between meaning and materiality.

This new understanding is meant to show the entanglement of mobility, justice, and sustainability as immanent to mobility by questioning what kind of worlds mobility configures. Thereby, a rhizomatic understanding of mobility invites us to rethink the ontologies of mobility, question the relations of power embedded in mobilities, and consider the material-semiotic processes and ethical implications of mobility (Davidson, 2021). This radical mobility “calls for the abolition of societies in which the configuration of (im)mobility is a technique and expression of systemic oppression” (Davidson, 2021, p.11) instead of the mere inclusion of marginalized voices in currently dominant notions of valued mobility. It poses the question of how mobility itself constructs value.

Borrowing from this concept will help critically approach power relations and question understandings of just mobilities. I aim to render the gendered and racialized hierarchies of value in Munich’s public transport visible and recognize the (im)mobilities of women facing intersectional discrimination. Seeking to combine this approach of mobility as material-semiotic with the notion of the bodies moving and knowing within it as material-semiotic “apparatuses of knowledge” will help to understand how different actors put meaning into the matter of mobility.

2.2.4 Access to Mobility

A special focus in this conversation on meaning of mobility will be women’s sense of security as ingress to mobility itself. Hereto, Church et al. (2000) propose a framework that links transport and social exclusion and suggest indicators to assess policies designed to shape mobility more inclusively. They present seven features of transport systems that are related to the exclusion of certain social groups from mobility: (1) physical exclusion; (2) geographical exclusion; (3) exclusion from facilities; (4) economic exclusion; (5) time-based exclusion; (6) fear-based exclusion; (7) space exclusion. While these factors are interrelated and all equally important, my focus in this thesis will be the sixth one related to the sense of security. This exclusion category refers to a person’s fear of safety preventing them from using specific public spaces or transport services. Here, it is essential to note how individuals’ “fear” in public spaces varies greatly depending on social variables, particularly gender (Church et al., 2000).

Following this thought of an individual sense of security as a dimension of accessibility to mobility, I aim to adopt Kaufmann et al. (2004) portrayal of motility as a representation of social inequality. They define motility “as the capacity of entities (e.g., goods, information or persons) to be mobile in social and geographic space, or as how entities access and appropriate the capacity for socio-spatial mobility according to their circumstances” (Kaufmann et al., 2004, p. 750). Thus, motility about transport is a holistic and multi-leveled concept interlinking networks, context, and social position and reflecting and forming the interdependencies of social structures based on the links between mobility and power.

Here, motility is expressed through three elements: (1) *access* to different forms and degrees of mobility, (2) *competence* to recognize and make use of access, and (3) *appropriation*

of a particular choice, including the option of non-action. The first element is shaped by the spatial distribution of infrastructure, the sedimentation of spatial policies, and socioeconomic position and is thus restricted by the available transportation options. The second element comprises physical ability, acquired skills (incl. specific knowledge), and organizational skills. The third and final element refers to how actors evaluate the options based on their perceptions of needs, skills, and values (Kaufmann et al., 2004).

By looking at how the sense of security affects these three categories, which are all interdependent and connected to the socio-cultural processes in which mobility is embedded, I want to make visible the safety needs of the more vulnerable and the reasons for their potential inability to fulfill their needs in Munich's mobility scene.

Further, Verlinghieri & Schwanen (2020) contribute to these ideas on access and mobility justice by combining the movement of recognition and responsibility taking with Davidson's (2021) rhizomatic mobility and thereby reframing mobility justice as an emergent process of participatory reflection, decision-making, and action. This enables echoing voices that have not yet been heard by making space for individual's stories and needs (Verlinghieri & Schwanen, 2020). On that note, Verlinghieri and Schwanen (2020) propose that researchers investigate the following questions: Are people struggling to fulfill their needs due to missing capabilities and transport supplies? Or does their inability to see their requirements met reflect "patterns of socio-spatial segregation and urban (re)development made possible by the same socio-technical, politico-economic and energetic configurations that enable and shape the movements of other people"? (Verlinghieri & Schwanen, 2020, p. 6).

3 Research Methodology: A Multi-Method Two-Stage Approach

Based on the research gap identified in literature and the STS and mobility studies concepts that help me to fill it, I pursued a two-stage research process (see Figure 1). Analogous to the research questions, I wanted to first explore the sense of security of intersectionally marginalized women in public transport and then study how women's sense of security is problematized by currently responsible people in mobility planning in the Munich Larger Urban Zone. With this sequential research design, I was able to use the initial part to familiarize myself with the roles of various marginalized women using public transport. Here, I could understand their perspective on their sense of security in public transport. This step prepared me for speaking to experts from the planning side afterward. Without building a foundation on the phenomenon of a sense of security from the user's perspective, I might have gotten more boilerplate answers from the experts. As safety is a phenomenon that encompasses systemic inequalities, studying it requires a systematic research approach such that I could adequately trace marginalization in mobility. Thus, for the first part, I chose a multi-method research process. I gathered data through mobility diaries, with go-along and post-diary-study semi-structured interviews. The second part consisted of two focus

groups and written information provided by additional participants who could not join said groups. Before going deeper into each of these methods, I want to briefly elaborate on Munich as the study context.

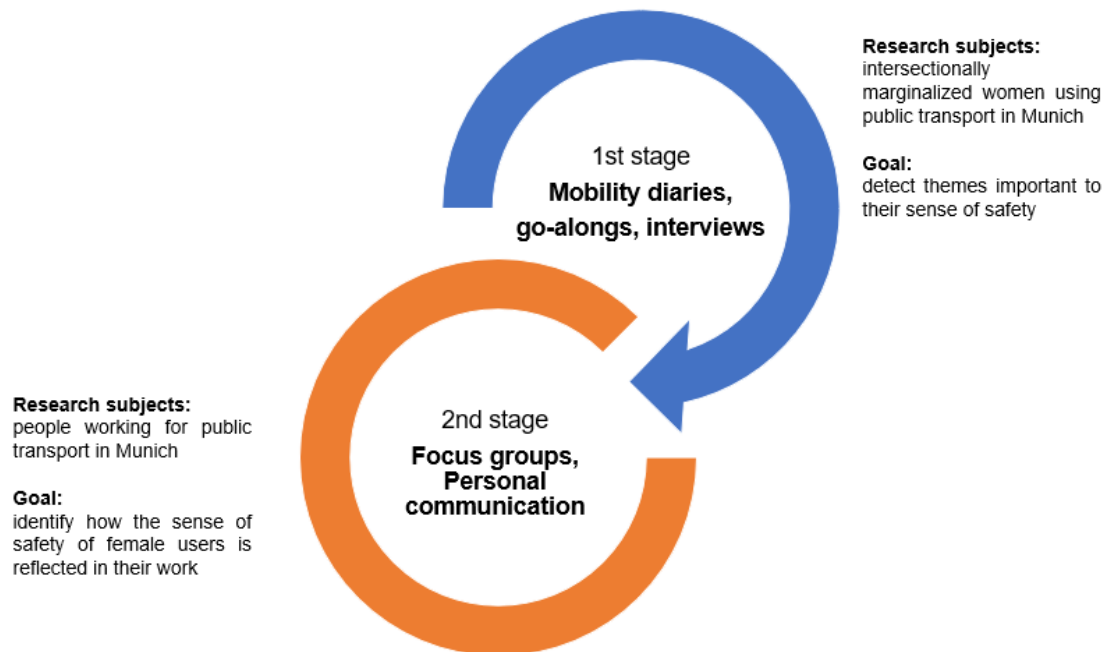


Figure 1: Overall Research Design

3.1 Study Context: Mobility in Munich

Munich, the capital city of the state of Bavaria in Germany, served as the location for the underlying study at a time briefly after approving a new draft strategy for mobility, the *Mobilitätsstrategie 2035* (Mobilitätsreferat München, 2021), and while working on sub-strategies thereof. As of 2023, Munich is home to approximately 1.5 million residents characterized by a blend of cultural backgrounds. According to the Statistisches Amt München (2023), 30.1% of the population are non-German citizens, while 18.5% are German citizens with a migration background, which leads to the city being called even called a “bunte” Stadt, a “colorful city” by the city itself (Statistisches Amt München, 2022).

So far, the topic of women’s safety in this city’s public transport has been understudied. However, there is some research on sense of safety in Munich’s public transport: First, research by Hennen & Hohendorf (2020) investigated municipal crime prevention in transition using the example of railway station neighborhoods in Munich, Leipzig, and Düsseldorf. Their comparative analysis showed that people in Munich felt safest, with 67% feeling safe during the day and 30% feeling safe at night. Furthermore, there was a focus on dark corners, such as poorly lit subways at construction sites, which, according to one interviewee from a Munich social center, conveyed

a lousy feeling. How factors such as dirt, confusing situations, and darkness influence the perception of safety was repeatedly discussed in the interviews and during inspections. Yet, most interviewees stated that the environment was not unsafe due to the construction sites; instead, they found the setting simply unpleasant. Meanwhile, others stated that they avoided the station area entirely if possible or took detours to avoid walking through the construction site (Hennen & Hohendorf, 2020). Second, Marius Otto (2011) wrote a more comprehensive work on “Communication and perceptions of security and crime - the example of Munich's suburban and underground railway system.” Here, the focus lay on the divide between media coverage, reported crime, and an individual's sense of (un)safety. First, the author determined the crime structures in Munich's urban and underground transport system based on police crime statistics. Second, he analyzed how the crime structure in public transport is communicated to passengers through media coverage. Third, the characteristics and changes in passengers' perceptions of safety or lack thereof were recorded. Thus, this study mainly focuses on how communicated crime affects the feeling of safety (Otto, 2011). Neither of these studies had a specific focus on gendered and intersectional forms of marginalization in Munich's public transport.

Another study is by Fröhlich (2021). It was financed by the city of Munich's democracy department and investigated hate criminality in Munich. This study found that acts motivated by prejudice are widespread and particularly relevant in public transport. In particular, the following characteristics played a role in people's victimization: lower socio-economic resources, origin, skin color, and membership in the Islamic religious community. This study saw an urgent need for action against offenses motivated by prejudice in public transport, recommending comprehensive education and prevention campaigns, optimizing reporting channels, and increasing training for public transport staff (Fröhlich, 2021).

In this study, I aim to fill the gap on intersectional vulnerabilities shaping women's sense of (un) safety in Munich's public transport by scrutinizing the experiences of gendered and intersectional marginalization in Munich's public transport system, contributing to a more comprehensive understanding of mobility justice in this diverse urban context.

3.2 RQ 1: Mobility Diaries, Go-alongs, Interviews

For the first part, I conducted a multi-method study including (1) a two-week mobility diary capturing experiences in the participant's day-to-day mobility behavior, (2) a go-along about halfway through the diary entry time, and (3) post-diary-study semi-structured interviews discussing the participant's entries.

The initial goal was to reach ten intersectionally marginalized women participants by contacting 30 organizations, institutions, and associations working with and for women who are elderly, with low-income, queer, and specifically trans, are black, women of color and/or have a migration background, and a refuge background and are of any intersection of the criteria as

mentioned above. However, this attempt only resulted in two positive responses, namely from one trans and one older woman. Thus, in the next step, I used WhatsApp Groups for students and the anonymous local app Jodel and its respective channels (such as @lesbian) to find further participants.

In the end, nine women fulfilling certain aspects of the above criteria completed the entire study (see numbers 1-9, Table 1, names used throughout are pseudonyms), two participated in semi-structured interviews (see numbers 10-11, *ibid.*), and one only submitted a mobility diary (see number 12, *ibid.*). Most participants participated in German except for numbers 5 and 9, who received an English translation. Naturally, the size and diversity of the sample do not allow for saturation, which is a deliberate choice. On the contrary, I was looking for a level of heterogeneity by collecting as many different experiences as possible and trying to show the multifariousness of the multiply marginalized women in their mobility experience.

The study was completed at the participant's convenience sometime between the middle of July 2023 and the end of August 2023. The mobility diary consisted of guiding questions on the day's route, perception of safety, coping strategies and precautions, and encounters. Following Latham's (2003) methodology on diaries and diary interviews, I aimed to give my participants a framework in which they could become aware of their routines and events in their daily commute (Latham, 2003). In the post-diary semi-structured interviews, I then asked questions about the participants' experiences while writing their mobility diaries, perceptions of safety, coping strategies, mobility behavior, interactions, and suggestions for improvement – thus allowing them to further meditate on their perceptions. While Latham (2003) asked his research participants to take photographs, I used the go-along method to better understand my participant's movement across Munich's mobility system. During the go-along, I paid particular attention to the choice of route, surroundings, interactions, and security precautions, reflected on my presence during their journey, and finally wrote field notes about those. This approach helped me to try *being-along* while navigating the routes of participants, which were previously often unknown to me, as described by Duedahl & Stilling (2020) (see Appendix 1-3 for the respective guides).

The entirety of this data was collected in a MaxQDA file, where I coded by using a thematic analysis approach (Braun & Clarke, 2006). I aimed to develop themes to gain an understanding of the public transport users and their respective perceptions, as well as tropes that could then inform my focus groups.

The sensitivity of the topic required an additional focus on ethical considerations. All participants were extensively informed about the study's purpose and how the collected data would be used, in addition to receiving a guarantee of remaining anonymous. Due to the delicate nature of the research, all participants were validated in only answering the questions they were comfortable answering. All participants gave their informed consent to these conditions. As participants might have talked about dramatic experiences that could be (re)traumatizing, I made

sure to enter my research informed in a way to guarantee to leave people in a stable state, aiming to “leave narrators feeling cared for, respected and that they have contributed to something that encompasses, but it also much larger, than their narratives” (Pascoe Leahy, 2022, p. 791). At the same time, I aimed to remain conscious of potential adverse effects on myself as a researcher and listener (Williamson et al., 2020).

3.3 RQ 2: Expert Focus Groups, Personal Communication

The second part mainly consisted of focus groups based on the results of the first part of the study. The focus group was meant to follow feminist principles, ensuring that the research was done by and with women and *for* women. Montell (1999) suggested focus groups to provide the opportunity to study gender issues with a more egalitarian relationship between the researcher and the research subjects. Through empowering relations between the subjects, the group interviews could provide support for some of the participants’ needs (Montell, 1999).

For this part, I contacted responsible persons working for the city’s public transportation system. Here, it is essential to note that Munich’s public transportation system consists of three main players in addition to the city administration: (1) the Deutsche Bahn (DB), which is the state-owned railway company of Germany operating suburban and regional trains; (2) the Münchner Verkehrsgesellschaft (MVG), which is the municipally owned company operating buses, trams and the underground and is a subsidiary of Stadtwerke München (SWM), thus from now on referred to as SWM/MVG; and (3) the Münchner Verkehrs- und Tarifverbund (MVV), which coordinates public transport in and around Munich. Here, an MVV employee responded that there was no designated responsible person for the safety topic within the organization. Additionally, the responsible person from DB reported being unable to participate in the focus group due to high workload constraints.

Thus, in the end, two focus groups took place: one with a mobility researcher from SWM/MVG and an administrative employee from the city’s mobility department responsible for mobility strategy, and another with two women tram drivers active in the SWM/MVG union. The talking points for the focus group were the collection of data on the perception of safety, existing measures, and solutions, as well as evaluations of previous measures and future goals, measures concerning public relations and sensitization, training and sensitization of staff, and technological solutions, cooperations and partnerships in Munich as well as exchange of experience with other cities. In addition, the city’s equal opportunities office informed me about their demands to the mobility department and the city’s subsidiary SWM/MVG, which is still awaiting a response to this date (December 2023). Furthermore, SWM/MVG’s corporate security team offered to answer additional questions via email.

This data was also coded following Braun & Clarke (2006), extracting the city’s and the MVG’s conceptualization of relevant themes for women’s sense of security in public transport.

Number	Name	Age	Gender identity	Nationality	Ethnicity	Sexuality	Race and Racialization	Profession
1	Adelina	24	Cis Woman	Brazilian	Brazilian	Heterosexual	Black	Student
2	Anna	32	Cis woman	German	German	Lesbian	White	Student
3	Caroline	23	Cis woman	German	German	Bisexual	White	Student
4	Chereena	25	Cis woman	Italian	Moroccan	Heterosexual	North African, visibly Muslim	Sales Manager, Babysitter
5	Daha	33	Cis woman	Egyptian	Egyptian	Heterosexual	North African, visibly Muslim	Currently unemployed
6	Sabitha	24	Cis woman	German	Tamil	Heterosexual	Brown	Student
7	Salima	18	Cis woman	German	North African	Heterosexual	North African, visibly Muslim	School Student
8	Sophie	50	Trans woman	German	German	Lesbian	White	Physician
9	Xiulian	25	Cis woman	Chinese	Chinese	Asexual	Asian	Student
10	Era	18	Cis woman	German	Albanian	Heterosexual	White, Foreigner	School Student
11	Carmen	73	Cis woman	German	German	Heterosexual	White	Physician
12	Ahali	25	Cis woman	German	Tamil	Heterosexual	Brown	Office Manager

Table 1: Study Participants in the 1st stage of research

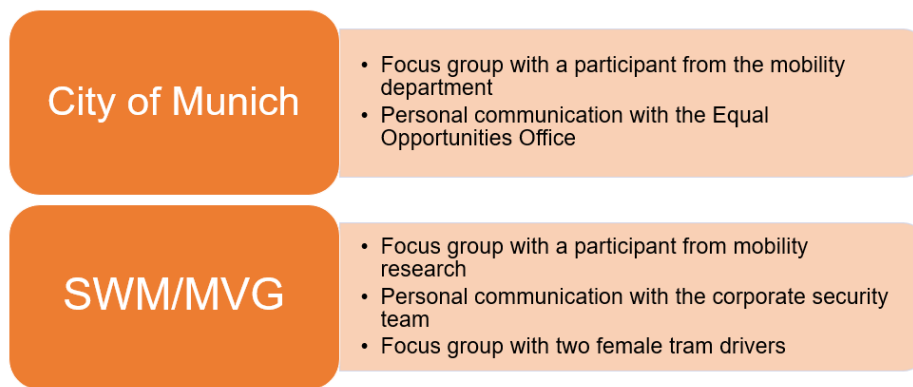


Figure 2: Study Participants in the 2nd stage of research

3.4 Positionality

For this research methodology, it is crucial to reflect on my positionality: In the range of intersectionality, my positionality as a woman researcher with a migration background, veiled per Islamic beliefs, shapes a unique lens through which I explore the experiences of intersectionally marginalized women. As I navigate the academic landscape, my narrative becomes intertwined with the narratives of the women I study, fostering a reflective approach. This journey allows me to recognize the interplay of my gender, migration history, and religious identity, acknowledging that my lived experiences influenced the questions I asked and the perspectives I amplified. It is important to note that while some women participants may recognize me as a reflection of their own experiences, especially the ones sharing my visible characteristics, the dynamics might shift with my queer participants, who may not acknowledge me in the same way. This complex dynamic adds depth to the research, emphasizing the need for a nuanced understanding of identity within the broader framework of intersectionality. Through this thesis, I aim to weave a narrative that not only delves into the complexities of intersectional marginalization but also reflects the intricacies of my own identity, enabling a dialogue that embraces the richness of diverse voices and experiences.

4 Empirical Findings on Intersectional Vulnerabilities Shaping Women's Safety in Munich's Public Transport

In this section, I will present my empirical findings from the above-described multi-method two-stage research process. Here, I want to give room for my participant's voices and their perspectives on the topic of safety in Munich's public transport. For this, I first show the findings of my first research question with the results of the multi-method data collection on the experiences of intersectionally marginalized women. The dimensions that I examined include their general sense of safety, lived experiences, of which most lay outside of their mobility diary period, the women's strategies to remain mobile in a safe manner, and finally, measures they would like to see improved or implemented in Munich's public transport networks. This information was then

used to inform the themes and questions for my second research question. Here, I focused on finding the reflections of the women's experiences in current and planned mobility initiatives by both the city's mobility department and their subsidiary SWM/MVG. In turn, these data bodies informed the conversation with the women tram drivers who additionally contributed to the topic of safety in implemented mobility initiatives.

4.1 RQ 1: Experiences of Women

For the first research question, I will present the results of the first stage of research, namely the multi-method study conducted with twelve women on their sense of safety in Munich public transport. The women moved via a range of public transport modes, including busses, trams, underground, and suburban trains as well as regional trains across a vast region in Munich. Thus, their experiences stemmed from various locations and settings across the city. In this section, I will present their evaluation of sense of safety based on various factors, their lived experiences in Munich's public transport, who they perceive as potential perpetrators and suitable saviors in critical situations, their own safety strategies and the measures they suggest for future mobility planning.

4.1.1 Sense of Safety

First, I would like to present the women participant's perspectives on their sense of safety while using public transport. The participant's sense of safety was generally reported to be very high, however it showed differences depending on various factors such as the environment, time-of-day lighting, crowdedness, and video surveillance. These points will be presented in the following.

4.1.1.1 General Perceptions

Here, the first interesting observation is that all women evaluated their perception of safety in Munich's public transport system as at least well to very high.

Xiulan wrote in her mobility diary that "generally [she does not] really worry about [her] safety in Munich public transport" (Xiulan, mobility diary, July 27, 2023). Chereena, who had moved to Munich 3 years ago, mentioned: "In terms of safety, three years ago, I was surprised that Munich was so safe." (Chereena, interview, August 19, 2023). For her specifically, it went so far that she feared her responses to my questions might be too dull, as she never had any considerations about safety at all (Chereena, go-along, July 19, 2023).

Some women compared their sense of safety in Munich public transport to other places. Caroline mentioned that her sense of safety in Munich is "quite high; in Germany, in general, it is" (Caroline, interview, August 12, 2023), and Anna additionally compared her experiences in Munich to her travels abroad:

I have also traveled a lot and been to countries where I felt very unsafe, although I think that has a lot to do with the fact that you inform yourself about it. I do feel safe [here]. (Anna, interview, August 29, 2023)

Daha, who also recently moved to Munich from Cairo, Egypt, was the wariest in her response, stating that she would describe her sense of safety as okay, “not the best thing, but acceptable” (Daha, interview, September 4, 2023).

It is noteworthy that there was a certain level of relativization in the women’s responses when they did experience something affecting their safety. Sophie, who felt watched in the underground noted that “perhaps some people might feel disturbed by being constantly observed by a stranger, but such a situation is rather standard in every woman's life. So, it is nothing special” (Sophie, mobility diary, July 20, 2023). Similarly, Xiulan had experienced something, that she called “terrible”, however stating that it “happened only once”, which is why she still considered it ok living in and using public transport in Munich (Xiulan, mobility diary, August 8, 2023).

4.1.1.2 Reasonings for Feelings of (Un)Safety

The participants accounted for their feelings of (un)safety by talking about hearing stories in the news or from relatives and friends or due to general parental warnings.

First, Adelina, who lives with her grandmother, remembered:

My grandmother explained this to me at some point, or at some point we read a news item together that a mentally ill person had simply pushed a foreigner in front of the train. (Adelina, interview, August 26, 2023)

In this line, Caroline, who said she barely experienced homophobia herself described that “other people do, you hear about it all the time in the news or read it in the newspaper” (Caroline, interview, August 12, 2023). Similarly, Daha explained the main reason for her worrying was that she repeatedly kept hearing stories about Hijabi women who were attacked, stating that the “latest incident was of an Egyptian lady who was attacked few months back in Munich” (Daha, mobility diary, August 4, 2023). Analogously, Salima described that she felt “a bit scared” as she “always hear[s] things like that at the main station that things are being stolen, that (...) someone attacks you” (Salima, interview, July 27, 2023).

Second, Chereena mentioned that her mother was repeatedly warning her, saying that she was “takings risks” (Chereena, interview, August 19, 2023). Similarly, Sabitha explained that while she felt quite secure in Munich, her sense of security was not as high at night, specifically as her mother was very anxious and had not allowed her going out late when she was younger (Sabitha, go-along, August 31, 2023). In the case of younger Salima, she told me that her father was not allowing her to be out at night due to fearing for her security (Salima, go-along, July 18, 2023). Era narrated her maternal warnings as follows:

My mom is just a lot more afraid, and I think you know that with every mom, that your mother always says, you should better go with your brother or do not go alone, or come on, I will come with you, so that you are not alone. But it is really not because she wants to harm me, because she wants to take away my freedom, but simply because of my safety. And sure, I mean no one loves you as much as your mom. (Era, interview, July 16, 2023)

In contrast, Caroline theorized that her lack of insecurity stemmed from the lack of parental warnings she used to be exposed to. She talked about how her father would sometimes say that “the 1860s”, the Munich soccer team fans, had raped a girl in the city and advised her to be more careful. However, as she had not lived with him since she was ten years old, she only experienced her mother's more relaxed approach. In this regard, Caroline compared her to her friend's mothers who would regularly pick them up by car in the evenings as they were concerned, while her mother raised her more care-free (Caroline, go-along, August 7, 2023).

4.1.1.3 *Waiting, Riding, and Walking Environment*

Their opinions varied when asked whether they felt more comfortable in the waiting or riding environment. On the one hand, some considered it safer at the station, as either as they could quickly run away there, especially if familiar with the different exits (Adelina, interview, August 26, 2023; Sabitha, interview, August 31, 2023), or because people were simply further away than within the train itself (Daha, go-along, August 22, 2023).

On the other hand, some others felt more secure on the trains and busses, even though they considered themselves “more trapped there” (Salima, go-along, July 18, 2023) as they “cannot run away if something happens” (Anna, interview, August 29, 2023). Anna supposed this might be because there usually are more people within the vehicles than at the stops, and as there is some “authority figure” (Anna, interview, August 29, 2023) on the trains she is using most often, namely, the train attendants working on the DB Regio trains between Munich and Freising, a city further North of Munich. Sophie described that while she acknowledged not being able to run away, she still felt safer within the underground:

When I am standing at bus stops or the station and so on, I sometimes find it a bit more threatening because you just do not know whether there is someone there at that time or so who could help you and so on. I always find it relatively safe on the underground itself. Because you always know, in principle, that you are constantly being watched and so on. I mean, I do not know what it is like at the other stations, but I think it is safer in the underground. You cannot run away there, but I have never really noticed anything. (Sophie, interview, July 28, 2023)

Additionally, some focused on the path from and to their respective station rather than their sense of safety at the stations and in the vehicles themselves. While Caroline generally described herself as a more paranoid person, her worries were limited to the times walking to stations:

So, on the suburban and underground trains, I usually do not pay much attention to who is around me, and when I am walking alone, I often see if anyone is behind me. Yes, I think I am a relatively paranoid person in general, but not on public transport. (...) It actually surprised me that I do not really pay attention to my surroundings when I am on the underground. (Caroline, interview, August 12, 2023)

Sophie and Adelina mentioned their walks from the stations to their homes with a specific focus on traveling at night, especially Adelina mentioned that her path was pretty dark:

The only thing that scares me a bit is the walk from the underground station to my home at a late hour, even though it is only about 700 m. (Sophie, mobility diary, July 18, 2023)

It is a five-minute walk from the underground station to my apartment. It is pretty dark at night because it is such a detour. I always run home as quickly as possible and look behind me to see if anyone is behind me. If I feel like someone is following me like that, I run home as quickly as possible. Or I call someone or my friends and say I am right there; can you pick me up or something like that. This does not happen so often that it is so extreme. It may have only happened once that I gave notice. (Adelina, interview, August 26, 2023)

4.1.1.4 Time of Day

As noted above, women's sense of safety often is directly related to the time of day. Era said that her sense of safety really depended "on the time of day when you go out" (Era, interview, July 16, 2023). In like manner, Carmen mentioned that her feelings also depended "a bit on the time of day. (...) When it is light, and people are more likely to do their jobs, then they have different goals" (Carmen, interview, September 2, 2023). However, this had different consequences for different women. Chereena, who is regularly commuting to distant locations at night for her babysitting jobs narrated that traveling at about two or three in the morning was the only time in which she felt a little uneasy (Chereena, go-along, July 19, 2023). Likewise, Sophie stated: "If you are out and about in the evening at 11:30 p.m., 12:00 a.m. or something like that and then you are really alone or something, then it is a factor of insecurity" (Sophie, interview, July 28, 2023).

Anna expressed that even when she was commuting alone at night, she still did not feel like she needed to change her behavior.

But in general, I travel alone a lot at night when I am driving home from somewhere. I have never said I would rather spend the night somewhere because I did not feel safe. I already feel safe. (Anna, interview, August 29, 2023)

Comparably, Adelina noted that while she did not feel safe at night, she still thought the level of her safety was acceptable.

I mean, yes, of course, when you are driving home as a woman on the road at three or four in the morning, you do not feel 100 percent safe, but it is okay to an extent. (Adelina, interview, August 26, 2023)

In contrast, Ahali noted that "in the evening you just avoid certain places where you want to go in public" (Ahali, mobility diary, August 3, 2023). Conversely, Salima described that she only used public transport at day, except when it could not be avoided in the winter times when she had school classes in the afternoon, and it became dark sooner. She mentioned that her father

would not allow her to be out at night, because he feared for her safety (Salima, go-along, July 18, 2023).

On that note, all women agreed on the importance of lighting.

I think lighting is essential because, at the stop, it is also important to see something to know what is going on. And if something happens, you will see it. So, I think then you feel safe. (Salima, interview, July 27, 2023)

However, they also remarked that the areas in and around their public transport usage were generally well-lit. Daha mentioned that she found the lighting situation very good, noting that she has not “seen a dark station so far” (Daha, interview, September 4, 2023).

Nevertheless, there were some minor exceptions. Chereena mentioned a bus stop in Neuperlach where she did not feel comfortable due to the lack of lighting (Chereena, interview, August 19, 2023), and Caroline described a situation in which she had to transfer from the suburban train to the underground train at the station Siemenswerke.

There, the suburban train and underground train are a long way apart, and you must go through a path next to a hedge. It was pretty dark there, and it counts as more or less like a stop because you are often directed from one to the other, which is OK, but it is a bit dark. (Caroline, interview, August 12, 2023)

For Sabitha, the question of safety at night was linked to the crowdedness on her route.

So, I feel very safe, except at night. I am a little more cautious than usual. But if the subway or bus is full enough, if there are enough people in it, then it is actually not a problem at all. (...) So, when there are a lot of people there, I feel safe. (Sabitha, interview, August 31, 2023)

4.1.1.5 Crowdedness

Though, public transport's crowdedness could both be a safe haven and a reason for discomfort. Sophie wrote that she felt “safe in the crowd of other passengers” (Sophie, mobility-diary, July 20, 2023). Equivalently, Chereena noted down that “there were many people around [her] and that calmed [her] down” (Chereena, mobility-diary, July 10, 2023). Analogously, the lack of people became a reason for insecurity.

When the city is very empty, there is not so many passengers, it gives me a little bit of insecurity. Because at that time you would not find many people to help you if anything had occurred. (Daha, interview, September 4, 2023)

Yet on the opposite side, too many people were also unfavorable. Adelina wrote that she does not like “feeling unsafe just because there are a lot of people around, but unfortunately you have to be careful (Adelina, mobility diary, August 19, 2023). Additionally, Anna described how crowdedness was a reason for discomfort.

I was on the train once and it was incredibly full (...) where everyone was really huddled together. You did not fit in anymore. I think a few people did not come

along either. I just did not feel comfortable there because it was just so tight. (Anna, interview, August 29, 2023)

Chereena explicitly mentioned that the composition of the crowd mattered to her sense of safety:

When there are many people then I always feel safe and especially when there are women too. For example, that night it was 3:00 a.m. but there were many people and many women also with headscarves. Because I thought, when you drive then it is always just the people who are out at the club or something with friends who take public transport, but that was not the case. There are also a lot of people who are on the move or who have suitcases, so they travel. That is why I felt safer. (Chereena, interview, August 19, 2023)

4.1.1.6 Video Surveillance

The participants had mixed opinions on the effects of video surveillance on safety. The positive effects of safety were rather seen in the potential for prosecution. Era thought that “video cameras would definitely provide security, just in case something happens, that you would know exactly what really happened” (Era, interview, July 16, 2023).

Similarly, Adelina noted that for her, video surveillance was primarily a means to justice through neutrality.

This prevents injustice from happening. I mean, of course, the police are there to protect, but the police also make mistakes and can also be racist. And in my opinion, this avoids a lot if you know, if we all know, that everything is recorded and saved.... And I believe that if there is video surveillance, then such cases of injustice happen much less than not if there is no surveillance. (Adelina, interview, August 26, 2023)

However, most of the other women did not agree that video surveillance was able to reduce the number of incidences. For Xiulan, they still helped in increasing her sense of safety.

I would say because it is like, well, it is like in China, we have this kind of like security system. Well, I feel safe, but it does not prevent things from happening 100%, so I do not know how it works here because it is a totally different system in a different society. I do not know. I just feel cameras alone would not make a big difference. (Xiulan, interview, August 15, 2023)

In contrast, Caroline felt like the cameras were not helpful, as those who made her feel unsafe would not take notice of the existence of video surveillance.

I have the feeling that people who make me feel unsafe are usually not people who act rationally and do not pay so much attention to it. So, if someone is drunk and bawling around there, I do not think they care that there is a video camera there. That is why I do not have such an increased feeling of security because of it. (Caroline, interview, August 12, 2023)

4.1.1.7 (Un)Safe Stations

Furthermore, when questioned about safe and unsafe stations in the Munich Urban Zone, the women agreed that the unsafe stations were an exception. Most mentioned that the downtown areas around Marienplatz and Sendlinger Tor were safe (e.g., Sophie, interview, July 28, 2023;

Era, interview, July 16, 2023). Caroline tied her feeling of unsafety to the presence of drunk people, which she mainly encountered at Ostbahnhof or Münchner Freiheit (Caroline, interview, August 12, 2023).

A common theme for increased safety was familiarity and proximity to home. Sabitha mentioned that for her, the places that she knew and that were near her home were the ones that seemed particularly safe. In contrast, “unsafe places would now be the main station, for example, because there are drugs there and so on” (Sabitha, interview, August 31, 2023). The Munich central station is a recurring place; for Era, it is correlated with unpleasant harassment through intrusive looks men.

I think there are also many shops, also a lot of foreign shops, for example, Afghan restaurants and so on. Not that I think they are evil or anything like that, absolutely not. It is just that there are a lot of people there, especially men, and you can really see it, so they are always looking at someone, or they are just really, really being harassing. (Era, interview, July 16, 2023)

This is in opposition to Maroccon-Italian Chereena, who feels at home at the central station.

I love the main station and its proximity because there are a lot of Arabic shops and stuff, and I feel a bit at home. And even if it is so late, I like to walk there, even if I see that there are a lot of Arabs or a lot of homeless people or something like that. I never feel like they will do anything to me because I don't know. So, I feel like I am home. (Chereena, interview, August 19, 2023)

Era has a noteworthy conclusion to the areas she describes as safe and unsafe.

But actually, I could say nowhere is safe except your own home, you know? And not even there in general, but specifically in your own home. (Era, interview, July 16, 2023, referring to feeling unsafe around neighbors as well)

4.1.2 Lived Experiences: “Scheiß Ausländer”, Fetishizing “Assholes”, Queerphobic Pensioners, ...

Second, I will present the negative lived experiences of the women public transport users. It is notable, that there here has been a certain level of disconnect between the high level of safety that all participants felt in comparison with the fact, that most of them were able to tell a story of being in a situation where they felt unsafe or were even being harassed for their specific characteristics. In this chapter, I want to give room to the women’s voices and depictions of how they felt discriminated against, racially attacked, or sexualized in Munich’s public transport system. Here, the most prominent themes were confusion, sexualization, religious, racial and ethnic discrimination, transphobia and homophobia, and witnessing discrimination. These themes are presented in the following.

4.1.2.1 Confusion

Daha, who has just recently moved to Germany and thus, does not speak any German yet narrated how the German announcements for Munich public transport, specifically within the trains caused her much confusion up to high levels of insecurity. This was in part as she was not yet familiar with the public transport network, especially the structure of suburban railways in Munich.

I feel insecure, I feel like, you know, confused, I feel lost, you know. Yeah, this causes many problems, especially if you have a date or if you have a train to catch or if you are interchanging trains or so. This is a disaster. Sometimes they do not announce cancelled trains in English, and we just keep waiting for our train and we do not understand what is going on. We have to ask other people. You know, it causes much confusion. (Daha, interview, September 4, 2023)

4.1.2.2 Sexualization

Xiulan told of an incident in which she felt sexualized by an old, male stranger for being an Asian woman.

It happened on Tram 12. I was sitting alone at the beginning, then an old man sat next to me and started to ask me questions in German. Starting with "Are you from Thailand?" I thought it was a harmless conversation, but the man touched me and approached me very closely to whisper something like "Liebe" and I felt so disgusting and changed my seat. (Xiulan, mobility diary, July 22, 2023)

Xiulan put her and the fellow passengers' reactions into the following words.

And I did not scream or whatever, I did not want to escalate the situation and I just walked away and then when I walked to another seat like no one even bothered to look at what happened. I mean, it is also very normal that someone changes seat or whatever so. Another thing was that it was the first time that happened to me, so I was so shocked I did not even know what to what to react to this kind of situation. What should I do? So, I did not do anything. I just changed my seat to a place where it is just far away from that person. And I am also not sure if I should tell the driver about it, because I do not know, I do not have evidence. And then there is ... nothing happened to me, and the driver was sitting in his little old like little room. So, I do not know what should I do? (Xiulan, interview, August 15, 2023)

Anna illustrated how she and her girlfriend at the time were sexually harassed on the escalators at an underground station.

We were going up and someone sexually harassed us. Not by touching us or anything, but the escalator was very long, and he went up the escalator until he was right behind us. And then he made obscene gestures, like near his penis and stuff. And he was making funny noises and pointing at us and pointing at his penis. (...) It is not the first time that something like that has happened to me because someone thought it was great that there were two women, and I am convinced that was the reason again. (Anna, interview, August 29, 2023)

In terms of reporting the incident she answered.

Unfortunately, you always have to weigh up what you might be doing to yourself with all the stress. You have to go to the police, you are questioned, you have to spend time and energy on the fact that probably nothing will come of it. I think it is the same with blatant sexual offenses. Unfortunately, you usually feel better psychologically if you help yourself instead of trying to report it somehow and get the proceedings through. And I also think that would have been too much effort and that probably nothing would have come of it. That you somehow do yourself more harm and everything. Rather than just saying, yes, it was shit, there are assholes, but luckily nothing happened. (Anna, interview, August 29, 2023)

Another account is from Adelina, unlike the others, this took place during her mobility diary period.

I was surrounded by many people. But only one person made me feel uncomfortable. That is all you need. (...) Extremely uncomfortable. I am sure a guy was stalking me on the subway. At first, he was incredibly close to me, even though the subway had enough space to move around. His shoulders were “glued” to mine and that made me uncomfortable, especially because I got “stuck” between him and the wall. When I reached Odeonsplatz and got on the U5, I thought he was gone and then I looked, he was standing right in front of me again, staring at me funny the whole time. (...) I hate men and do not understand why they think such behavior is okay. (Adelina, mobility diary, August 21, 2023)

4.1.2.3 Religious, Racial and Ethnic Discrimination

Sabitha remembered a situation, where she was in the underground with her mother, a Hindu woman wearing a bindi, a red dot of religious significance at the center of her forehead.

We went somewhere together a long time ago. And then suddenly a woman started insulting my mother, somehow with the red dot and stuff. And I cannot remember exactly what it was. I think the woman really insulted her. And then another man came and intervened because we could not say anything. And then he said, leave her alone, it is not your business. (Sabitha, interview, August 31, 2023)

Salima recounted an occurrence in the suburban train when she was travelling back home from the airport after completing her Islamic pilgrimage with her family. A random man started shouting “Scheiß Ausländer”, meaning “shitty foreigners”, to her and her family (Salima, go-along, July 18, 2023).

The same thing also happened to Era, who normally is not recognized as non-German, in the bus, when she was speaking Albanian with her mother.

I am rather light, you know. But whenever I spoke Albanian with my mom, for example, she does not speak German very well (...) and one evening, we wanted to go home, my mom and my siblings were there. There was a man behind us who was, he was really drunk (...) and he was shouting around and saying, “You shitty foreigners” [original: “Ihr scheiß Ausländer”] and stuff like that. (Era, interview, July 16, 2023)

Adelina described an experience, in which she was racially attacked in the underground without understanding what was happening.

I was actually on the phone, and I did not realize what he was saying at all. I even apologized because I thought I was just talking out loud or something. And then there was another person next to me and the man turned on the guy, the old man, who was talking to him. He said that is wrong, that is racism, he is not allowed to say that. And I did not even, to this day I do not know what he said because I did not pay attention. As I said, I was on the phone. And this nice person just protected me. And then other people in the underground were also very upset and so on. Quite angry and upset. A lot of people were actually against this old man. They told him it was wrong; you do not do that and so on, and that I should call the police, but the situation got so big on the subway. And everyone was looking at me the whole time. It was so unpleasant that I just wanted to get off and go home. And then my stop finally came, and I just got off and said thank you. And then I just went home and then I thought to myself... then I even needed a bit of time to understand that everything had happened. Because actually, it never happened to me in Brazil, even though Brazil is extremely racist. (Adelina, interview, August 26, 2023)

Chereena equally experienced a confrontation while on the phone. This is one of the few incidents that happened during the mobility diary period, while all previous accounts were about past experiences.

A man sitting in front of me started shouting at me because he did not want me to use my phone. He said that in England cell phones are forbidden on public transport and that I had to get off the bus to make a phone call. Two ladies without headscarves, but probably Turkish, started defending me saying I could go ahead and use my phone. And I said that he was the one disturbing the others because he was shouting. I continued talking on the phone. He stood up, looked at me menacingly and said: "These people are from Turkey!", even though I am not Turkish. At that moment I had the feeling that he wanted to hit me, but he continued to insult me in his language, I think he was from Eastern Europe, and got off the bus. (Chereena, mobility diary, August 5, 2023)

She criticized the lack of intervention from the fellow seemingly German passengers and the bus driver.

What was a bit stupid was that the Germans did not say anything. So, there are a lot of Germans, so I think I and the two women, and the man were the only foreigners and also that the driver did not say anything, so the driver has this microphone, so he could say something and calm down or something, he did not do anything. (Chereena, interview, August 19, 2023)

4.1.2.4 Transphobia & Homophobia

Caroline mentioned that she normally did not experience much queerphobia, mainly as she was normally not recognized as bisexual even though she was wearing the flag as a bracelet (Caroline, go-along, August 7, 2023). However, she did mention some occasions.

I do not experience much homophobia, but every now and then, at CSD or when I hold a rainbow flag, I have had someone spit on the ground in front of me or something like that. And I mean, it was kind of like a pensioner, he did not seem like he was doing anything more than that. (Caroline, interview, August 12, 2023)

Sophie explained how she has not always felt as safe as now in public transport, as she recalled the times during her transition.

It might come as a surprise that I can now travel by public transport without any problems, because during my transition in 2014 I had to listen to several odd comments about myself on buses and trains. Once, a group of young people (5) standing opposite me were discussing what I was. At one point, one of them said to another that he could grab into my pants and then he would know. That was the tip of the iceberg, and I avoided public transport for several months after that. (Sophie, mobility diary, July 25, 2023)

4.1.2.5 Witnessing Discrimination

Additionally, the participants were describing cases of racialized attacks on other people that they had observed during commuting with public transport. Sophie recounted an observation she made with her wife.

We once had a case where a lady was sitting opposite someone who, in her opinion, had music that was too loud. It was a person, yes, from the People of Color area, who could not speak German and had the music too loud. And then she tried to make this clear to him, but he did not understand her and accosted her a bit rudely and when he went outside, she let out a line like, "That would have never happened in Adolf's days". That was quite remarkable, people looked really, really, really, very, very, very crooked after she said that. But that is the way it is. That is how people are. (Sophie, interview, July 28, 2023)

As she herself is not a person of color, her witness account was comparably distant to for example the one by Adelina. She explained that she only encountered it only as a witness "so far" ...

Sometimes it happens against other people, especially black men. Or refugees too. I have also seen refugees being told so much that they should go home and that they do not fit in Germany, same for immigrants. I have seen that with other people, but I have never experienced anything like that myself yet. (Adelina, interview, August 26, 2023)

... while Daha also mentioned how she feared a harasser might turn to her next as she is also visibly a foreigner.

There was that Turkish guy and a drunk man started attacking the man, calling him Ausländer and I do not know, I was afraid that drunk guy might turn to us and start attacking me because I am also a foreigner, and I am visibly a foreigner because of my hijab. (Daha, interview, September 4, 2023)

Common themes across these experiences are that most often the participants were in too much shock to respond as they might have otherwise. Often, they did not know how to react, but were rather looking forward to escaping the incident without generating further attention or disrupting anyone. While they were generally grateful for the help and somewhat expected the support, none of them thought about asking for fellow passengers' assistance in dealing with the situation. With regards to reporting, this was not a topic for any of the participants, regardless of the severity of the occurrence. They did not want to go through the hassle of reporting to the

police, but also did not consider reporting the incident to any responsible channel on public transport planning in Munich, neither the city nor the companies providing the services. Xiulan provided a very interesting statement in this regard: “I actually do not blame the public transport I used because it is not the reason why it happens to me or it is totally not my fault (for using it)” (Xiulan, interview, August 15, 2023).

4.1.3 Potential Perpetrators: (Drunk) Men, Soccer Fans, and Insensitive Staff

Third, I will show the theme on potential perpetrators. Partially based on their own negative lived experiences, the women classified the characteristics of the most likely perpetrator: the (drunk) men.

Carmen, who generally felt safe in the presence of other people, noted that she felt safest in a “mixed company” and least safe in “an alcoholized, uniform company” (Carmen, interview, September 2, 2023). Equivalently, Era stated that she feels more comfortable around women and families than around groups of beer-drinking men.

When I see a lot of women in one place, or when I just see mothers with their children or families, especially when I just see families, I feel much safer than when I see a group of guys in their mid-20s with a beer bottle. (Era, interview, July 16, 2023)

Xiulan agreed with this notion and preferred staying in distance from such groups.

If I was alone on the public transport in general and there is a bunch of men, drunk and loud, I would also think it is just very... (...) There might be that something would happen. So, you might just be better off staying away from them. (Xiulan, interview, August 15, 2023)

In her mobility diary, she explained, that she worried not being able to leave a potentially dangerous situation based on the presence of a group of unknown men.

Got a bit nervous when male strangers especially in a group waiting for the train on the platform. Have this feeling of if there was something happening, I could not easily get out of the trouble - kind of worries. (Xiulan, mobility diary, July 27, 2023)

For Daha, she feared that alcohol might lower the threshold of people’s willingness to interact.

People who come out of their parties late at night, who are drunk or so, make me feel a little bit insecure. Because alcohol can make people behave in an uncontrollable way. Someone who does not like the presence of foreigners or so, if he is not drunk, he might not interact, but if he is drunk, he might just go and attack those foreigners and kick them out of our country. (Daha, interview, September 4, 2023)

Adelina stressed that she was most uncomfortable around men who did not respect her and her girlfriends not wanting to engage in conversation.

Especially when we are girls and then men want to talk to us, but we do not want to, and they do not respect that. This happens quite often at night. This is when I usually feel unsafe. (Adelina, interview, August 26, 2023)

The notion of drunk men also got tangled up with another popular theme: the (drunk) soccer fans. Both Xiulan and Caroline mentioned drunk men and soccer fans in a similar fashion. Xiulan additionally noted that the amount of people mattered to her, specifically in relation to the Munich folk festival Oktoberfest.

But maybe too many people are also kind of not so safe, especially with like, I do not know, Oktoberfest and a lot of like drunk people. And I also do not feel so safe and also, when it is like football games. Like a lot of like drunk fans. (Xiulan, interview, August 15, 2023)

Caroline feared that potential aggressions might affect her in the crossfire of disputes.

So, I am a bit worried about football fans or something like that, for example if they start fighting, that I am standing too close or something like that, that has not happened yet, but it could happen or with drunk people if they are just kind of aggressively drunk or something, that they then start stressing out on someone and I do not want this to be me. (Caroline, interview, August 12, 2023)

Anna simply summarized her feelings as follows: “I tend to feel more insecure with men than with women. (...) Yes, it is men who tend to trigger a feeling of insecurity.” (Anna, interview, August 29, 2023).

However, it is important to note, that it is not just fellow passengers who can be perceived as potential perpetrators, but also public transport’s staff. Two types of staff have been mentioned by the participants: Bus drivers and ticket inspectors. Daha mentioned that she started avoiding busses as she felt uncomfortable because of how some of them had treated her.

I try to avoid buses because bus drivers sometimes come silly. Sometimes they ask for your ticket in a bad way or so and I use an electronic ticket on the application. So, you know, opening your phone and a bus driver is shouting at you is not the best thing. (Daha, interview, September 4, 2023)

Besides, Salima and Sophie have described unpleasant interactions with ticket inspectors. When going along with Salima, I noticed her nervous reaction to the ticket inspectors approaching us despite having a valid ticket for the ride. After the control I asked her if they made her nervous and she confirmed, explained that while she did have her ticket, she wondered what if something was wrong with it? She told me that she used to not buy tickets sometimes due to financial reasons and once was checked on such a day. The inspectors asked her many questions, investigating whether her name was correct, and not believing the information she was giving, thus asking to see her email address or school notebooks to check for her data (Salima, go-along, July 18, 2023)

Sophie experienced a similar interaction with a ticket inspector during her transition, where she felt threatened due to having to expose herself with regards to her deadname on her personalized ticket.

It actually happened two or three times, that was at the time when I was basically already in the transition process, but my civil status had not changed yet, and I still had a personalized ticket. And my old name was on the personalized ticket. And this officer just did not want to believe that that was my name or that it was my ticket. At that point I was really so adamant and determined that I told him that he could fight it out with me here on site, I would win anyway. Yes, so he either believes me, or he does not believe me, the point is, of course, that it is extremely embarrassing, because then of course a lot of people around you are, well, strange, because they look. Then of course you feel a bit threatened because I mean, of course you do not want to say in public what the background is. So, I did not want to say that, so hello, I am trans and well, a lot of people will probably feel that way, that it is not nice. Yes, that is it, but it was really a situation that came about a while ago and then it was over again. Then at some point the civil status was changed and then it never happened again. (Sophie, interview, July 28, 2023)

4.1.4 Suitable Saviors: Strong Men, Fellow Females, and the Driver

Fourth, I will present who the women participants deemed their potential helpers. Here, there was a certain discrepancy.

Most of the participants explained that they would first resort to calling someone they personally know: “That is the first thing that came to my mind, I would call someone. Friends, family, or something” (Sabitha, interview, August 31, 2023). Sophie explained this might make the potential aggressor reconsider.

So that someone who might want something realizes, OK, it is a little less safe if I were to do something, because there is someone who knows straight away or something like that. (Sophie, interview, July 28, 2023)

Some did rather think about capability, stating that they would look for someone who was neither too old nor too young and who looked trustworthy and might have already witnessed the incident (Caroline, interview, August 12, 2023). Carmen even specified the notion of a strong man, whom she would ask to help her: “I would like a friendly-looking, strong, middle-aged boy or a man of any age, just has to be tall enough, something friendly, masculine, not too old” (Carmen, interview, September 2, 2023). Anna recognized that she would not prefer to approach a single man, instead she would choose a couple.

Not a man who is alone. So, assuming there were a lot of people, then I would probably choose a couple, because there would be two of them and a woman might not necessarily want to put herself in a threatening situation. But if there are two of them, then yes, probably a couple. (Anna, interview, August 29, 2023)

Nonetheless, most focused on fellow female passengers that might be more eager or capable of helping. Sophie recalled an incident where she fell in the underground train and only female passenger attempted to help her.

The ladies standing there immediately wanted to help, while everyone else did not care. And that actually makes it clear that you would probably unconsciously move in the direction of that gender straight away. (Sophie, interview, July 28, 2023)

Similarly, Era also mentioned, that she would “always look more towards women” (Era, interview, July 16, 2023) while Salima added “women with headscarves” (Salima, interview, July 27, 2023). Adelina rationalized her preference for female helpers as she thought that women shared similar experiences.

We know all the things that happen to us in everyday life, in the subway. What happens to me has also happened to others, happened to female friends of mine. I also know that it is easier to get help from a woman, that my situation is more sensitive and understandable to us than a man, to be honest. (Adelina, interview, August 26, 2023)

Chereena explained, that she would prefer woman, but in the case of not seeing any nearby, she could also imagine addressing Arab and Turkish looking men, as she believed that they had the willingness to protect women due to their “macho” perspective.

If there are different people, I will go towards women and if there are no women, then if there are foreigners. I do not know why, but for example, if I choose an Arab or a Turk, then because I think that with us, they respect women and they have this idea, this macho idea, that the man should protect you... They should protect women. And yes, and then they think, she is like my sister, then I must support her. (Chereena, interview, August 19, 2023)

Finally, Sabitha considered the severity of the situation, stating that while she preferred women her age, “if it is really bad, then [she] would turn to anyone.” (Sabitha, interview, August 31, 2023)

While most of the women assumed that help from the passengers was more easily attained, in case of the occurrence happening in a bus or tram, they also did mention the respective drivers as potential helpers (Carmen, interview, September 2, 2023; Daha, interview, September 4, 2023; Era, interview, July 16, 2023). Chereena thought, that “the drivers should do something” (Chereena, interview, August 19, 2023). Xiulan presumed, that “in the usual case, you could really rely on the drivers, (...) you can easily reach the driver” (Xiulan, interview, August 15, 2023). She also acknowledged that this “only works with like bus or tram and with undergrounds not” (Xiulan, interview, August 15, 2023), as the driver is in the same space for the first two, while secluded in the latter. Though Era added that she would not necessarily rely on the bus driver as he is “alone, he is at the wheel, he cannot see it (...) he is busy driving, [and] has to make sure that he does not cause an accident” (Era, interview, July 16, 2023).

In regard to their own potential to help others, the participants considered their own capabilities, specifically when it was a dispute between men.

If there are two guys weighing 190-100 kilos, then I will try to stay away, to be honest, because there is nothing I can do, I am 168, I weigh 61 kilos (...) but I do not think it can lead to anything meaningful, but yes, I would hope that other people can de-escalate. Otherwise, if there is absolutely no one else there, then I would try to de-escalate verbally, but I would keep a bit of distance. (Caroline, interview, August 12, 2023)

Sophie explicitly stated that she was “guided a little bit by the genders” and thought that “when they [the men] argue with each other, then the men should also get involved [in solving the issue]” (Sophie, interview, July 28, 2023).

In comparison, Carmen had training and experience in de-escalation, and thus making her more prone to intervening when necessary.

I am one of the [members in an activist group] and we have done de-escalation training because we sometimes need it. And that is why I do not have any great inhibitions about saying something when I hear or see things that I do not like. (Carmen, interview, September 2, 2023)

Meanwhile, Adelina, who is a Brazilian citizen, explained that on the one hand, she did not want to interfere as she feared the danger might turn towards her and on the other hand, she had worries considering her residency.

I never want to have any problems because I do not have German citizenship yet and I am not trying to get any help from the police, from anyone... I know I am right in theory, but I do not want anything to affect my residence permit or anything. (...) It is very complicated. (Adelina, interview, August 26, 2023)

4.1.5 Safety Strategies

Fifth, I will present the women’s safety strategies. Here, participants often first stated that they do not have any precautionary measures, however upon further questioning revealed certain strategies to guarantee their safety such as adopting general cautiousness, avoiding (certain) groups of people, choosing their routes and seats strategically, refraining from femininity, and passing as cis and straight.

4.1.5.1 Being Cautious

A general sense of caution was the most prominent strategy for the participants. Daha, who is generally worried about islamophobic attacks due to her hijab wrote that she “watched for any suspicious movement behind [her] to respond in time” (Daha, mobility diary, August 7, 2023). Often, this wariness led to the participants trying to move faster to avoid spending too much time around others. Adelina mentioned that she “always go[es] home as quickly as possible and look[s] behind [her] to see if anyone is behind” (Adelina, interview, August 26, 2023). Similarly, Chereena aimed to stay “vigilant the entire time” and keep her distance from people at the stops (Chereena,

interview, August 19, 2023). For Caroline, researching her routes in advance so that she could reduce confused lingering at stations was one means to achieve his.

I always find out in advance about where I want to go in the sense of whether I should get in the front or get in the back [of the underground], so that I can get from A to B in a targeted manner and not wander around so much, and I think that certainly contributes to me being safer if I do not look so confused. (Caroline, interview, August 12, 2023)

4.1.5.2 Avoiding People

In addition, most participants mentioned avoiding groups of drunk people: “When there were very drunk groups, I would get up and just go somewhere else” (Carmen, interview, September 2, 2023). Here, Salima even mentioned avoiding getting off at a certain station to prevent herself from running into groups of drunk people.

I do not get off at the Hackerbrücke, but at the second bridge. It has been that way since I was little, because my mother always said, that this was where most of the drunk people are. So, we always get out at Donnersbergerbrücke. (Salima, interview, July 27, 2023)

Sophie additionally mentioned avoiding people whom she thought might have “some problems with the queer spectrum” as she had experienced being accosted before.

I have also actually experienced at train stations and so on when you are out and about after Christopher Street Day or something like that, if you are just wearing something rainbow-colored, that you sometimes run the risk of being accosted if there are groups of, I will say in quotation marks of semi-strong people of other faiths, if that is what they are. (Sophie, interview, July 28, 2023)

4.1.5.3 Choosing Safer Routes

Besides, most participants were choosing routes that they evaluated as safer than others. They either chose routes that were better lit or routes where they would be accompanied by someone else.

So, I do not go through dark corners or anything like that and I think about it beforehand so that I know, OK, so I think this route is safe, so I will do that. (Sophie, interview, July 28, 2023)

If I am driving with a friend and I know I can reach the same destination via a different route, then of course I will take the friend's route. That is always good when you are not driving alone, it is also more entertaining when you are with someone. (Adelina, interview, August 26, 2023)

4.1.5.4 Sitting Strategically

Some of the participants adopted the strategy of sitting strategically within the vehicles. While some preferred sitting separated...

On the tram, I can pick a seat where it is just like a single person seat, so I do not need to sit with another person. (Xiulan, interview, August 15, 2023)

...others theorized that sitting closer to other women might be an opportunity to look out for each other.

I think it is more the case that you can protect each other a bit. So, if you sit next to other women, then maybe they also have a feeling of safety, you can tell whether people feel comfortable or not. I mean, when you are out late, you are not necessarily forced to sit right next to people, but it is good to be close to them, I think that is good for everyone. (Sophie, interview, July 28, 2023)

4.1.5.5 Refraining from Femininity

Furthermore, Sophie mentioned that for her, wearing pants instead of skirts was partially a means to make herself less vulnerable to attacks.

I feel like you are much less vulnerable to attacks when you are wearing pants than when you are wearing a skirt, that is how I see it personally and that is why when I know that situations can be more dangerous and so on, then I might also make sure that I do not necessarily make myself a victim in any way. If you can see that as a strategy, that is of course more normal life for me because I am one of those people who chooses clothes practically, but of course that is part of it. Of course, it is also practical if you know that it makes you less vulnerable. (Sophie, interview, July 28, 2023)

Similarly, Xiulan who had experienced sexualization due to being an Asian woman noted that she tried to portray “not seeming as a super nice Asian woman” by avoiding social contacts: “no eye contact, no physical contact” (Xiulan, mobility diary, August 9, 2023).

4.1.5.6 Passing

Moreover, all participants from the LGBTQ+ community had certain considerations regarding their passing. Caroline acknowledged that she was more likely to be read as heterosexual because of her style and had never traveled on public transport with a partner before (Caroline, go-along, August 7, 2023). Anna thought that most people would not recognize her as a queer even though she somewhat fit in the lesbian stereotypes: “the flannel and nose piercing and stuff, I think most people do not realize that it is such a cliché” (Anna, interview, August 29, 2023). Sophie sometimes did think about whether people in public transport saw that she was trans: “I often think that many people should recognize me as trans*, but actually most people are not interested in anyone else. That is why I feel very confident” (Sophie, mobility diary, July 21, 2023). However, this was not always the case. Sophie remembered her transition, explaining how her passing changed with the length of her hair.

It was really down to the length of your hair, which may sound stupid nowadays, but it was down to the length of your hair, and you went through certain stages where you can really say that people smiled at you at first and made fun of you a bit, you noticed how people talked to each other. And then it became less and less and less. And at some point, it disappeared. (Sophie, interview, July 28, 2023)

In short, the participants were by themselves not necessarily read as queer these days, unless they were seen with rainbow-flags or their respective partners. Here, both Anna and Sophie mentioned that they were considering to what extent they would like to be seen as lesbian couples in public transport.

We also have to admit that since we have been traveling like this, we generally do not show our relationship so much to the outside world in public, that is something that really has to be said unequivocally. We have been holding hands a lot less and there are far fewer expressions of love in any form than there used to be. Because we really do have the feeling that we do not necessarily have to do that. It is a shame, it is perhaps also wrong not to do it, but it really is like that. (Sophie, interview, July 28, 2023)

I think that if we were in a situation like that, where there was almost no one left, I would perhaps make sure that people did not look at us. So, I would probably really look at it if there were hardly any people left, yes, then maybe. Not so obviously holding hands or something. (Anna, interview, August 29, 2023)

4.1.6 Suggested Measures

Sixth, I will present the measures the participants suggested for improvement in Munich's public transport. In addition to the above-described individual strategies, the participants also had some ideas for measures of improvement they would like to see implemented, with a focus on political measures and infrastructural changes. The most favored measures were reducing overcrowding, more security staff, and public awareness campaigns. These and further measures are presented below.

4.1.6.1 Decreasing Overcrowding

One major theme for all participants was the ongoing constructions for both suburban and underground trains that led to an increased crowdedness and confusion. While for most, these were not a reason for feelings of unsafety, they did feel more tense and uncomfortable. "I am fed up with this never-ending construction work." (Adelina, mobility diary, August 14, 2023) is one of the statements regarding the situation. Thus, most participants were wishing that the providers would strive more towards avoiding overcrowding of stations.

The MVG certainly tries to avoid extremely busy places, but those were the situations where I had the feeling that people were a bit tense outside of commuter traffic. (Caroline, interview, August 12, 2023)

In addition, Daha, the only participant who did not speak any German, also called for English announcements and guidance from the stewards (Daha, interview, September 4, 2023).

4.1.6.2 Hiring More Uniformed Staff

Generally, all participants could imagine that more uniformed staff would increase their sense of safety in public transport. For most, this meant an increase of security guards.

Maybe more security people. There is never anyone there, in my opinion. And if there are, then only underground stewards. (Sabitha, interview, August 31, 2023)

Caroline reasoned that the presence of uniformed staff in general might demotivate people to drink on public transport.

I have seen uniformed people walking around a few times, at night in the direction of Münchner Freiheit, where drunk people are most often, from my routes, and I think that helps people to drink a little less on public transport, which in my opinion is one of the main reasons why I feel uncomfortable on public transport. (Caroline, interview, August 12, 2023)

Further, Carmen preferred the hiring of more stewards helping the passengers, specifically regarding confusion with old age.

So, I think what you often find in the USA is a kind of steward employed on a mini-job basis. I am not confused just yet, but I am 73 and dementia is very common, and you always see people who are disoriented, where they should get off, where they should go. So, I would actually like to see something like that, a volunteer force employed on some kind of basis, similar to the school crossing patrols. (Carmen, interview, September 2, 2023)

Yet, some of the women acknowledged that a large-scale coverage with security personnel was not likely.

You cannot put security on every bus, you know. (Era, interview, July 16, 2023)

Of course, you could speculate about whether it would be great if there was someone at every station who could be contacted directly if something were to happen, but I do not think that is feasible. (Sophie, interview, July 28, 2023)

4.1.6.3 Sensitizing Staff

The two women affected by some degree of unpleasant treatment by ticket inspectors additionally hoped that the staff would receive adequate treatment of young people on the one hand and trans people on the other.

In any case, I think that inspectors should pay attention to how they talk to younger people. (Salima, interview, July 27, 2023)

Of course, I would like the staff to be trained to deal with such situations [i.e., name not aligning with personalized tickets]. (Sophie, interview, July 28, 2023)

4.1.6.4 Increasing Police Presence

Some of the participants even wished for increased police presence.

To provide like some easy access to policemen or someone to help if anyone encountered a racist act or so on a public transport because foreign people, especially people who look visibly foreign like us, should have some easy access to police or some people to protect them in case they were attacked in one way or another. (Daha, interview, September 4, 2023)

Even though some mentioned that having police going around did not necessarily mean they would be at the right place at the right time.

Because these are kind of like possibility kind of thing. Even if you put people out there, it is not like they are just running into these kinds of situations every time, so I do not know. (Xiulan, interview, August 15, 2023)

4.1.6.5 Establishing Emergency Buttons

Most participants acknowledged that they already were emergency buttons for medical emergencies at most underground and suburban train stations. Nevertheless, they wished for a further establishment of those buttons across all stations and bus stops in the public transport network, often thinking of them as a more feasible alternative to additional personnel.

So, you would not have security staff at every bus stop, but if you had a button that you could press to somehow activate a control, I can imagine that, of course it will cost a lot and a lot will probably be broken. But I can imagine it. (Sophie, interview, July 28, 2023)

4.1.6.6 Introducing Women's Wagons

One participant did mention the potential introduction of women's wagons, however, was very cautious about that idea.

Some countries have women's wagons, but I do not know if that is necessarily helpful. I mean, it should be helpful, but I do not know if it actually is (...) I mean, it is just when a situation like that happens, maybe it could be avoided, but it does not happen that often either. I mean, it happens a lot, but for a person themselves... Yeah, I honestly do not know. (Adelina, interview, August 26, 2023)

4.1.6.7 Offering Self-defense Courses

Yet another participant suggested state-funded affordable or free self-defense courses for young women.

You can offer courses for us women or just for the young people in our society in general. But that they are perhaps not expensive, because you can say, hey, I can actually afford that and I will do it, I will take time for my own safety, because look, kickboxing €60, I do not think I can afford that. (...) that they are maybe even free, that they come from the state, you know. So, that you maybe even have them in the schools, that you say, ok, look, every Friday we have an hour for the children who want that, that someone comes, like a workshop, maybe that you can do something like that. (Era, interview, July 16, 2023)

4.1.6.8 Creating Public Awareness

One of the most favored measures was the development of public awareness, in specific due to the participant's worries on current societal developments leading to a potential decrease of civil courage.

I really believe that you can really wonder what some people are like and how our society is developing. I always find that a bit of a shame because I am

always a bit afraid that if something really happens on a subway or bus or something like that, who will have the courage to do anything? Because then people are on their own and think, ah, I will just look the other way. I do not know what would happen then. I have no idea. I have not experienced it yet, so I do not know. (Sophie, interview, July 28, 2023)

Most participants called for people to practice more civil courage or for people's civil courage to be further encouraged.

That people become a bit more empathetic, that people, when they see that someone is in danger, that people actually do something and do not just sit down and watch like they are watching a movie. (Chereena, interview, August 19, 2023)

Simply by encouraging people's civil courage. (Era, interview, July 16, 2023)

One method mentioned to do so was public awareness campaigns.

Yes, well, there are always these posters outside, (...) against racism, (...) against discrimination. You could also (...) convey emotionally that you should react like this if a person is in danger. (Chereena, interview, August 19, 2023)

While they did acknowledge, that providing public awareness did not necessarily mean changing people's mindsets.

Maybe providing some awareness for people who are scared of foreigners (...) I do not know how you would change the mindset of people; I do not know. (Daha, interview, September 4, 2023)

4.2 RQ 2: Mobility Planning

For the second research question, I will look at how the relevant actors in Munich public transport are planning and enacting safety measures in relation to the safety considerations of intersectionally marginalized women as recorded above. For this, I have conducted two focus groups, the first with a representative of the city's mobility department and a mobility researcher from SWM/MVG; and the second with two women tram drivers who are active in the MVG union¹. In this section, I will present their evaluation of sense of safety of women in public transport, the completed, ongoing, and planned measures for improvement of safety, and their understanding of safety issues as a societal problem. Finally, I will show that there still is some political pressure for future improvements.

¹ Here it is essential to note that both participants focused on their own personal safety as drivers rather than the sense of safety of the women users. While their answers in this regard are equally important and beneficial to the improvement of safety in public transport, this thesis focuses on the sense of security of public transport *users*, thus mainly the answers regarding this aspect were considered in the results sections.

4.2.1 Sense of Safety

All participants noted that the level of safety in Munich was quite high, whereby the mobility researcher was relying on her own generated data in the customer satisfaction surveys of this year, in which there was a slight negative tendency, which she did not see as a need for action:

There is a bit of a negative trend when it comes to the sense of safety. But I will just be honest and say [to management] that the data is certainly no reason to take an incredible number of measures. (SWM/MVG mobility researcher, focus group, October 17, 2023)

The mobility department's representative noted that they did not collect any additional data regarding public transport as "everything that concerns public transport, the surveys are carried out by MVG and [they] are in constant contact with them" (mobility department representative, focus group, October 17, 2023). She mentioned that for her, the fact that the topic of safety was not occurring at all, meant that it was not an issue.

In the end, we see public transport as a means of mobility for everyone and actually as (...) very safe means of transport compared to other cities, which is why it is perhaps not yet so much (...) in our own strategic considerations. As I said, the topic is not yet so present. I actually see that as a good sign. Because ultimately, if there were a lot of incidents, it would become even more prominent. (mobility department representative, focus group, October 17, 2023)

The data collected by SWM/MVG for their networks was not considering any additional characteristics beside a binary notion of gender.

I really have to say that we are perhaps still a bit old-school in this respect, we still tend to differentiate between female and male and notice that we carry out a regular customer satisfaction analysis every year, where we simply ask about topics relating to the subjective feeling of safety on public transport, we survey this every year and look at the results, which are relatively stable with a slight downward trend. Apart from that, we do not actually take a more differentiated look at it, exactly, but you can see that it is an issue for women. And of course, we also compare this with what actually happens. That has not increased either. (SWM/MVG mobility researcher, focus group, October 17, 2023)

However, "with what actually happens" might be somewhat distorted as for example both tram drivers explained that they only report incidents with physical injuries.

If it is really something bigger, where you have pressed the emergency button and then you write a report about it. But these smaller stories, no. (tram driver 1, focus group, October 26, 2023)

We usually do that when there are injuries. If a driver has been punched in the face or something like that, and we have to write it all up. (tram driver 2, focus group, October 26, 2023)

Also, the incidents recorded through the reports do not consider any characteristic of the victims.

Our basic philosophy is to protect all people equally and to ensure their safety. We do not differentiate by gender here. We do not evaluate which gender (m/f/d) is more often involved in incidents. (SWM/MVG corporate security, email, October 31, 2023).

In the focus group, both participants were reluctant to claim a focus on the (sense of) safety of women in public transport. Here, the mobility department strategist also considered societal effects of such an endeavor, especially when communicated outwardly.

I just think it is a bit dangerous to say too strongly, okay we do something for the safety of women only. (...) [A]t the end of the day, young people, like boys, could feel just as unsafe. So, I would actually move away a bit from just saying woman, man, because when you talk about women, you are pushing them into a bit of a cliché. She must be afraid when she goes home alone in the evening and stories like that, so you really have to be very careful what words you choose, so in the medium term, if we are tackling this issue of communication, that would definitely play a role, but I would see it more holistically. (mobility department representative, focus group, October 17, 2023)

The SWM/MVG's mobility researcher agreed, adding that guaranteeing safety was a prerequisite for both the company and the users.

So, you simply must guarantee safety, you have to guarantee that you can have a good feeling of safety in our means of transport, (...) safety is simply a prerequisite and if it is not given, it is very bad for the image and also for those who use it. But I also see it the same way as you, there are many more groups affected than women, young women and indeed young men, because gang wars and so on also depend a bit on the areas. (...) But of course, we guarantee safety for all population groups. (SWM/MVG mobility researcher, focus group, October 17, 2023)

Thus, the corporate security has only one goal for the future: "Maintaining the good safety level" (SWM/MVG corporate security, email, October 31, 2023).

4.2.2 Completed, Ongoing, and Planned Measures

The city and the SWM/MVG had implemented and was planning to implement various measures to guarantee a high level of (sense of) safety for their users, including video surveillance, trained staff, aimed punctuality, on-demand-services, SafeNow technology and public awareness campaigns.

4.2.2.1 Video Surveillance

The first extensive measure being implemented by SWM/MVG is video surveillance in stations and vehicles. Here, the SWM/MVG mobility researcher described that they did get feedback by customers that they did not necessarily see the benefit as it could only be used retrospectively, however still believed in the deterrent effect of video surveillance.

We also rely on video surveillance, especially in underground stations as a deterrent, then some passengers say, yes, but then you cannot do anything at the moment, that is true, but it can certainly act as a deterrent. (SWM/MVG mobility researcher, focus group, October 17, 2023)

Both tram drivers agreed, stating that it also increased their feeling of security.

I have to say, I think it is good to have camera surveillance in vehicles or so. So, it also gives you a feeling of security, because I also think that now not everyone dares to do, I do not know what, because it is being recorded and so I think it contributes to the feeling of security. (tram driver 1, focus group, October 26, 2023)

4.2.2.2 Training Staff

The second measure by SWM/MVG is training staff. This is one of the points reflecting earlier demands of the women public transport users. Here, corporate security noted that “the special training for subway guards/field staff (e.g. drivers, traffic wardens)” included “correct handling of rape victims/emotional situations and conflict resolution” and that “the training content is adapted accordingly based on the results (of the regular market research study)” (SWM/MVG corporate security, email, October 31, 2023).

The mobility researcher gave a concrete example thereof in the focus group.

In the survey, we actually had the appearance of the security staff, and they are not only supposed to guarantee security, but also to be a point of contact. And quite a lot of women said, well, they sometimes seem like black sheriffs or have a bit of a wide-legged appearance, which is not a bad thing in terms of security, but does not necessarily encourage people to go up there and ask a question if they want to know something, and that is what was included in the training, so try to act authoritatively, but also in such a way that you come across as a contact person. (SWM/MVG mobility researcher, focus group, October 17, 2023)

The staff perceived the training as adequate and helpful and was somewhat thankful for their employee for offer such training.

We also have training courses that we receive in (...) de-escalation training or dealing with difficult passengers is what it is called. (...) So, the employer already looks at that and if there are incidents, they also try to see what can be improved or whether there are possibilities. So that is definitely the case. (tram driver 1, focus group, October 26, 2023)

I think the training is good because it is helpful (...) So, they really help you to deal mentally with all the stories, somehow, and also to learn somewhere, how can I react, so I have to say, it is good. (tram driver 2, focus group, October 26, 2023)

However, this did not mean for the drivers to like being perceived as a security guard by the passengers – which is in direct contrast to the women viewing the drivers as their main point of contact in case of needing help.

I was on route 19, Ostfriedhof, and a passenger came in towards the front, a huge guy, broad shouldered, and said to me as the driver, please come to the back, there is a fight going on back there, someone is being beaten up. That is when I went to the back with the tire iron, but I looked at the man first. Me a little

girl, to put it plainly, him a guy and I had to go to the back. (tram driver 2, focus group, October 26, 2023)

They already see us as... Yes, they can fall back on us, they do not know what to do themselves at the moment and we are the first point of contact. But of course, with some things I do not necessarily want to intervene and then it is difficult again, but as I said, we have a quicker line of communication when we make an emergency call, the police are usually there faster than if someone calls the police as a passenger. (tram driver 1, focus group, October 26, 2023)

Naturally, the drivers prioritized their own safety, and both described being thankful for the new carts to have secluded spaces as opposed to the older versions, where there was no barrier in between driver and passengers. This is noteworthy, as for the women, these barriers led to a feeling of not being able to reach the drivers as helpers while the drivers on the other side, felt safer themselves.

4.2.2.3 Hiring Staff

The third measure, which is linked to the above, is hiring more staff. Specifically, SWM/MVG's corporate security is planning to hire more staff for above ground stations and stops.

At the moment we only have the underground station guards. So, staff actually only in the subway, that would now also be for the surface, that is in the planning stage, security staff will also be deployed there, so with the tram and bus area. How this will look like concretely, whether they drive around in the area or tend to stay at stops that are a bit dicey, that is not yet clear. But it is clear to us that this is a relevant issue. (SWM/MVG mobility researcher, focus group, October 17, 2023)

Both tram drivers welcomed this incentive:

I think it would probably be helpful at weekends and at night, especially on certain routes at certain junctions. (tram driver 1, focus group, October 26, 2023)

Personally, I would think it would be good if you could at least have them at certain places where there is a lot going on or where you just know at night when they come out of the nightclubs. (tram driver 2, focus group, October 26, 2023)

4.2.2.4 Becoming Punctual

The fourth measure is that SWM/MVG is aiming to improve regarding punctuality, arguing that this is also connected to better safety.

Our focus is on guaranteeing reliability and punctuality, which is also linked to safety. So, the shorter you wait at a dark bus stop because the bus arrives on time, the better. I have the impression that women in particular are increasingly putting this into context, saying that it is really important to us that you drive reliably. (SWM/MVG mobility researcher, focus group, October 17, 2023)

4.2.2.5 Reviving On-Demand Services

The fifth measure is introducing a new service – or rather re-introducing a service which had been cancelled during Covid times – the IsarTiger, an on-demand-van that could pick women up wherever they are and bring them to their destination through pooling.

Perhaps there is one other topic (...) which in my view solves a lot of problems, and that is these on-demand services, which we now want to revive. So, in the MVV there is the pilot Flex, exactly, that you just call a vehicle by app or by phone for a certain route, so similar to a cab, only much cheaper and we want that at MVG. That already existed as IsarTiger, it was called. Then unfortunately in the Corona time, we had to stop it again, because it was not allowed that there were so many strangers in one vehicle, but it is currently being worked on again and should be revived as soon as possible and I think it is really perfect for women (...) with pooling. Right, but the driver, everything is known about him. He definitely conveys a feeling of safety and we also discussed this with the pooling, whether women in particular would perhaps see it as a problem if other people got on the bus, unless they were totally drunk, which he would not take in anyway. There is a driver there and they would definitely feel safer there than on the bus, where you do not necessarily know who is getting on. (SWM/MVG mobility researcher, focus group, October 17, 2023)

4.2.2.6 Introducing SafeNow Technology

The sixth measure is the introduction of the SafeNow safety app, which is currently in the project status for the SWM/MVG corporate security team (SWM/MVG corporate security, email, October 31, 2023). This app was meant to be implemented before the Oktoberfest, however had to be postponed due to fire hazard considerations of the beacons that need to be built into the underground stations for it to function.

It is an app that you can install free of charge, and you define the groups that you can call for help in an emergency. So, on the one hand you can limit yourself to your own circle of friends and acquaintances and can alert them very discreetly via this app or you can take professional security personnel with you, so to speak, the police and so on and can alert them and the moment you are in a SafeNow Zone, the whole thing is much more convenient. (...) I also discussed this with my participants in group discussions and it was polarizing. They kept saying how quickly would the security staff arrive. Again, and again the tenor was that we would really prefer it if staff were actually already on site in precarious situations or at such stops, then again this, how quickly will someone come? (SWM/MVG mobility researcher, focus group, October 17, 2023)

The mobility department's employee was rather critical of this approach, speaking from the perspective of a woman rather than a mobility expert.

In subways there are already emergency buttons and more lighting etc. If you could set up things like that at certain tram stops, I think that would be another win. I am actually wondering at bus stops, so do not take me as a specialist but simply as a woman who moves in public spaces. I might be at a darker bus stop, feel uncomfortable and want to press a button but stay there. My first instinct is actually to see if I can somehow get away from this dark area into the

lighter area. And then I wonder a bit if you press it and then have to wait a long time until someone comes. Then I would be even more afraid and would say OK, I would just leave and then I would say that would for the staff who comes in, be it the police or something else, it would be then difficult to act, is she still there, is she no longer there and perhaps this exact emergency call is missing somewhere else (...) Accordingly, I imagine the implementation to be difficult and whether it can then really be used so well or is simply misused by many. (mobility department representative, focus group, October 17, 2023)

In the end, this conversation led to the responsibility of attention generating measures being relayed to the affected people.

This is exactly what we have already discussed internally. An emergency call button at the bus stop is of course a suggestion. Misuse would be a big issue, as some bus stops are in the middle of residential areas. And then someone might want to press it at night, set off a false alarm and everyone wakes up, so unfortunately, it is difficult. (...) It has always been an issue and I do not think you can find a solution. I really think the best thing is for the passenger to have something like that with them, there is a stick where you pull something out that then it starts to howl really loudly. I really think something that you personally have with you would be a better solution. (SWM/MVG mobility researcher, focus group, October 17, 2023)

4.2.2.7 Creating Public Awareness Campaigns

The seventh measure is public awareness campaigns. Here, the mobility department strategist referred to two campaigns - the first is an ongoing video campaign on their website.

We have a website called München unterwegs [English: Munich on the move] and there was a campaign recently where a small video clip showed a wide variety of people, including children and women and men getting on and off buses, trams and the like, and then ultimately saying that we stand up for each other, so to speak, that we do not look the other way when things happen. (mobility department representative, focus group, October 17, 2023)

The second was a campaign in cooperation with SWM/MVG for better coexistence and more safety on Munich's roads.

We are now also working with MVG on this "Merci dir" campaign, there were also various flyers or stickers in our building that you could theoretically stick on certain things or something, that say more together [original: Mehr miteinander] for example, or less grumbling [original: Weniger granteln] or, more friendlier [original: Mehr freundlicher]. Exactly, and there is also a bit of youth slang, if you like, so that you can say Amore, brother [original: Amore, Bruder], Amore sister [original: Amore Schwester], so really a bit of this also trying to appeal to younger people with it. (mobility department representative, focus group, October 17, 2023)

The mobility researcher additionally mentioned the screens in the vehicles showing clips motivating polite behavior, which are supposed to also address safety concerns in future.

What we already have are these little films on the screens in the subways, which are generally about polite and considerate behavior. (...) We have a new agency for marketing, so we want to completely revamp everything, and I have

already told my colleagues to please include the topic of safety and behavior and helping each other in emergencies in campaigns, so this is of course an issue for us. (SWM/MVG mobility researcher, focus group, October 17, 2023)

Here, the mobility department strategist also considered further including the topic into the mobility strategy's sub-strategy on inclusion.

Maybe you could also sensitize people a bit more in this context: We are all human beings first and foremost, and that speaks again for whatever skin color or whatever, we are here together. (...) So, we are one society. I think you could perhaps write this principle a bit more either into a sub-strategy or in campaigns or whatever, you can also put it a bit more in the foreground. (mobility department representative, focus group, October 17, 2023)

Furthermore, after a brief discussion on generational changes and the effects of influencers, both participants in this focus group agreed it might be a good idea to cooperate with influencers in this domain.

I do not think we can get rid of these influencers or their power, we probably have to use them in our direction. That you find influencers who say, now behave properly on public transport. Everyone is considerate, then we will all be better off. So, I really think we need to go more in that direction, because we are trying to curb the negative images a bit. And on the positive side. Yes, that is actually, I will make a direct suggestion. (SWM/MVG mobility researcher, focus group, October 17, 2023)

Using influencers, to be able to address other target groups. (mobility department representative, focus group, October 17, 2023)

4.2.3 Understanding the Issue as a Societal Problem

All participants in the focus groups agreed that the incidents described by the women participants in the first stage, as horrible as they are, were not limited to the setting of public transport. Munich's mobility department representative and the SWM/MVG mobility researcher stated that:

Ultimately, this is not necessarily a safety in public transport, but a societal issue. (...) In fact, public transport is not a focal point in that sense, (...) that it only happens there. (mobility department representative, focus group, October 17, 2023)

Of course, experiences like that are bad, but I just think it is a problem for society as a whole and, as with all kinds of campaigns on our website, it always says that we stand for diversity, everyone is welcome here, everyone should ride with us and we have, but I think just like society as a whole at the moment, we have so little to do about these problematic groups that are on the increase. It is a difficult issue. (SWM/MVG mobility researcher, focus group, October 17, 2023)

As a final statement, both again stressed that the issue was not a public transport one, but one for society as a whole.

I keep thinking that in my opinion it really is a problem for society as a whole. So, we are part of the public space. We try to do our best there, but it really depends incredibly on how a society behaves, what the mood is like. Whether

you feel threatened or whether there are threatening people or whether they allow themselves to have fun. (...) So somehow you have to catch it in society as a whole, but I do not see a solution there right now. And of course, we have to treat it as an important issue all the time, but I think we are in a pretty good position. (SWM/MVG mobility researcher, focus group, October 17, 2023)

Yes, that is exactly how I see it. Ultimately, it really is an issue for society as a whole. (...) and I think the only thing we can do, say in the company or at the city, and so on, is to raise awareness and continue to work on the issue, be it by acquiring personnel and so on. But everything else must be managed at other levels. We cannot do that on our own, meaning now as the mobility department. The city of Munich itself is also trying to raise awareness with various campaigns via various departments as a cosmopolitan city and the like. But then something must come from both sides, from the people themselves, so that they are perhaps encouraged to think a little more about some things. (mobility department representative, focus group, October 17, 2023)

4.2.4 Political Pressure

Despite the company and department reporting high levels of safety, the city council commission on gender equality saw need of action regarding the sense of safety of women in public transport. Thus, they have written to SWM/MVG and the city's mobility department, stating their general planning needs. Their recommendations can be summarized as follows: (1) campaigns and statements against sexism and violence against women; (2) (gender competence) training for staff; (3) information on advice and contact points for people who have experienced violence on buses, subway (stations), trams, especially during major events such as Oktoberfest; (4) safety-enhancing lighting at bus shelters, subway exits, etc.; (5) digital emergency notification system at remote bus shelters; (6) establishing and advertising the offer of individual alighting between bus stops on bus routes after 9 p.m.; (7) safety inspections of bus stops and subway exits with the equal opportunities' officers of the district committees with subsequent safety-promoting measures, quality check of existing video recording options; (8) explanatory videos to be played on the screens in buses, trams, and subway stations on non-violent, gender-sensitive interaction with one another; (9) efficient and up-to-date analog information and signage management about routes, social insecurity factors and avoidance of remote locations with a focus on female passengers during construction measures and in the evening and at night on public transport (city of Munich's equal opportunity office for women, email, October 18, 2023). The response to these requirements is still being processed by the mobility department and SWM/MVG. Yet it remains interesting that the political sphere sees room for action in spaces, which the participants in my research saw as adequately covered due the reported high levels of safety.

4.3 Summary of the Results

All in all, the empirical findings in my two-stage multi-method research can be briefly summarized as follows:

	Users	Planners
<i>Safety Perception</i>	Through embodied lived experiences as users in the Munich public transport network, differences f.ex. based on time of day and crowdedness	Through embodied lived experiences as users and drivers in the Munich public transport network as well as market research with users, focusing on male/female division with no further criteria
<i>Safety Evaluation</i>	High level of sense of safety despite negative lived experiences due to specific characteristics	High level of sense of safety in the gathered data with a slight decline, not necessitating any additional incentives according to planners
<i>Safety Measures</i>	<i>Individual Strategies:</i> Being cautious, avoiding (certain) crowds, choosing safer routes, sitting strategically, refraining from femininity, passing as straight & cis-women <i>Call for action:</i> decreasing overcrowding, hiring additional, well trained uniformed (security) staff, increased police presence, introducing emergency buttons at all stops, offering self-defense courses, creating public awareness campaigns	Video surveillance, hiring and training staff, becoming punctual, reviving on-demand services, introducing SafeNow app, creating public awareness campaigns with further measures potentially forthcoming
<i>Understanding Safety in Public Transport</i>	Describing experiences of (un)safety in public transport as an extension of experiences in public space	Pushing narrations of (un)safety in public transport to the general society, public transport as one space among many in the public domain where safety for all needs to be guaranteed

Table 2: Concise Synthesis of Results

5 Discussion on Intersectional Vulnerabilities Shaping Women's Safety in Munich's Public Transport

After presenting women's experiences in Munich's public transport and the mobility planners' perspectives thereof, I will now delve into a comprehensive discussion that intertwines these

findings with the research questions and the broader scholarly discourse. The following discussion seeks to show the nuances of urban mobility through the lens of situated knowledges, rhizomatic understanding of mobility and through the perspective of motility and access. Throughout the discussion, the aim is not only to provide a comprehensive analysis but also to foster a dialogue that resonates with the broader scholarship on gender, mobility, and urban planning. By bringing into dialogue my empirical findings with theoretical perspectives from different fields, I aim to contribute nuanced perspectives that move towards mobility justice formed by the diverse narratives of women in urban spaces in Munich.

For this, I start with a discussion on how women's sense of safety is based on their situated and embodied experiences in Munich's public transport by mainly drawing from Haraway's (1988) situated knowledges and Seamon's (1980) idea of a place-ballet. Subsequently, I argue that safety considerations are co-produced in the specific mobile environment of public transport as a secluded space and that these dynamics prove that mobility is not merely a physical act but a social phenomenon, based on Davidson's (2021) rhizomatic understanding of mobility. Afterwards, I elaborate how a woman's ability to move freely within the urban space is linked to her sense of safety by adopting Kaufmann et al.'s (2004) concept of motility. Consequently, I present the strategies women implement to secure their safety in dialogue with strategies from previous research. Then, I argue for the importance of space claiming (Koskella, 1997) by intersectionally marginalized women to combat the cis-heteronormative dominance in public space. Last, I discuss the lack of nuanced perspectives on sense of safety in the current public transport planning.

5.1 Situated and Embodied Experiences in Munich's Public Transport

In the first section of the discussion, I elaborate on how the findings from the study showed that knowledge needs to be considered as embodied and situated, how the participants' understanding of sense of safety is intertwined with their upbringing and their own experiences as intersectionally marginalized women, and how sense of safety in public transport is co-constituted from the interrelation between the women's embodied identity and their surroundings.

First, the findings from both stages of research highlight the importance of considering knowledge as embodied and situated within the participant's roles in the realm of Munich's public transport system. Here, it can be noted that different forms of expertise can be embodied in a single person which shapes the way that person then analyses public transport. While the participants in the first stage of research understand public transport as users, the participants in the second stage make sense of public transport as both users and from their professional perspectives as planner, researcher, and drivers. This became specifically visible in the first focus group. During that focus group, there were many incidents in which the public transport strategist from the city's mobility department stressed during her responses how she was answering as a

user or a citizen or a woman instead of answering as a professional. Thus, she was dividing her sense-making into the two spheres of work versus private life. Similarly, the tram drivers also repeatedly noted that they were founding their responses not only on their experiences as drivers but also as public transport users where they could observe fellow users' experiences better. In contrast, the women from the first part of my study only experienced public transport in Munich as users, thus were only able to draw expertise from this standpoint on. This situatedness based on the professional and/or private role reflects the practice of positioning in the processes of knowledge production coined by Haraway (1988) in her understanding of vision in situated knowledges. Here, her question of "Where to see from?" (Haraway, 1988, p. 587), can be partially answered with the role that the participants inhabit while making sense of Munich's public transport. While accounting for the topic of (sense of) safety in public transport, they are "seeing from", thus knowing from their roles as planner, researcher, driver and/or user.

Second, the findings from the first stage of research showed that the participants' life stories and experiences in public transport are extensively intertwined with their identities and intersectional characteristics. This shaped the way they managed and understood their feelings of (un)safety in Munich's public transport. Here, the women draw both from narrations that have been passed to them by relatives and other as well as from their own experiences. On the one hand, their knowing of safety in the public space and specifically in public transport is influenced by their upbringing. This is at times explicitly noted by the participants themselves when they talk about how the topic of safety in public transport was narrated to them through (the lack of) (grand)parental warning, sometimes based on the news they consumed (together). Specifically, the two younger participants Era and Salima noted that they were hesitant, or simply not allowed to, travel alone on public transport when it was dark due to their parents' worries. Similarly, Sabitha said that she still felt more concerned about commuting at night due to her mother's past restrictions. On the contrary, Caroline explained that the absence of maternal warnings could be a reason for her consistently high sense of safety. These findings reflect how sense of (un)safety in public space is not an inborn characteristic of women but rather becomes socially constructed through (parental) warnings in childhood lessons about (un)safety as found by Boys (2022), Koskella (1997) and Levy (2019). On the other hand, the women draw from their own lived experiences. These experiences are based on their individual characteristics, thus, who they are and who they are viewed as in terms of their nationality, ethnicity, *race*, religious practice, class, and sexual and gender identity. This refers to their experiences and comparisons to their home countries and travels, and, most importantly, their own lived experiences of (un)safety in the context of public transport in Munich itself as who they are in the intersection of being a woman, while also (visibly) being *Black*, *Brown*, Asian, North-African, Hindu, Muslim, Foreign, non-German speaking, lesbian, trans*, young, old, ... Thus, their knowledge about (un)safety is not only embedded in but significantly affected by the specific conditions in which they derive this

knowledge. All women act as “apparatuses of knowledge” (Haraway, 1988, p. 595) and produce knowledge through their very own standpoint, their “vision”, which is shaped by their respective identities. The experiences of a visibly Muslim foreigner differ from those of a white, middle-class German woman, but they equally differ from the ones of a queer woman of color.

Third, the women’s experiences reveal how sense of safety in public transport is co-constituted from the interrelation between the women’s embodied identity and their surroundings. The above-mentioned individual experiences are made as the intersectionally marginalized women move through public transport in Munich in a certain time and political context. At the junction of the traditional Bavarian city with the globalized modernity with its specific public transport infrastructure, a very particular context enabling certain interactions evolves. Safety concerns and considerations are not universal but dependent on this defined context of Munich’s unique socio-cultural dynamics which play a vital role in shaping women’s mobility experiences. Hereby, the women’s mobility is constituted in their relationship as moving bodies with their material-semiotic environment. This is what the phenomenologist Seamon (1980) called the “place-ballet”, a concept describing the individual’s movement and meaning-making in a particular environment: As the women traverse through Munich’s public transport system, they make sense and evaluate these places based on their interactions within and with it.

Concluding the exploration through situated knowledges and the place-ballet, it becomes evident how important it is to integrate nuanced viewpoints to better understand (sense of safety in public transport) mobility. The insights from this study contribute to mobility research by introducing a feminist and phenomenological approach to consider individual safety perceptions and experiences of women. Through the integration of situated knowledge and phenomenological perspectives, the research expands the foundation for understanding mobility through the comprehensive influences of the intertwinement of individual roles, intersectional identities, and distinct environments on women’s mobility. The women’s experiences as intersectionally marginalized women underscore the necessity of acknowledging varied perspectives in discussions about safety. Here, the women’s narratives serve as invaluable sources of knowledge. Transport planning should consider these lived experiences as essential inputs for crafting policies that resonate with the realities of individuals navigating the public transport system and for creating mobility solutions that resonate with the complexities of urban life in Munich. In doing so, policies can be developed that actively address the concerns and needs of those who have been historically overlooked and marginalized to pave the way for a more inclusive and responsive urban mobility landscape in Munich.

5.2 Rhizomatic Understanding of Munich's Public Transport

In the second section of the discussion, I argue that safety concerns are co-produced in the specific mobile environment of public transport as a secluded space and how these dynamics illustrate that mobility is not merely a physical act but a social phenomenon.

The findings from the first stage of the study show that sense of safety is co-produced in public transport as a restricted space, which is a distinct social environment shaping women's experiences. The participants themselves, both users and planners, regard public transport as one element of public space, which gathers people from diverse backgrounds, motivations, and aims in a secluded space for a defined period, enabling interactions that are only possible in this specific setting in terms of environment and people. They acknowledge, that the events happening in public transport are happening due to societal changes, and consequently stating that these problems are not a public transport problem but rather a societal problem. Though, public transport in Munich is taking place within society, and is shaped by society as much as it is shaped by the intricacies of mobilities themselves including the infrastructure and the fellow users, the drivers, the planners, etc. Thus, public transport mobility is intertwined with feelings of (un)safety for intersectionally marginalized women. This reflects Davidson's (2021) rhizomatic understanding of mobility as the material-semiotic transformation of energy, where mobility is immanently entangled with justice and enables the expression of power and oppression. Public transport therefore poses unique challenges in which safety concerns are co-produced in their specific mobile environment (Lewis et al., 2021) through the way that gender, class, *race*, ethnicity, nationality, sexual identity, etc. enact embodied differences corresponding to the existing mobility systems (Cook & Butz, 2018). In line with Verlinghieri & Schwanen (2020), in the case of this study women were at times struggling to fulfill their need of safe and comfortable travelling due to mechanisms that favored enabling the movements of one group of people over the movement of the other. As Ahmed (2012) describes, in this politics of mobility, the presence of certain bodies restricts the mobility of others. Here, it was often - but not exclusively - white, ethnically German, or German-presenting, people acting as harassers in the accounts of past experiences of the racialized women in my research. In addition, my findings support the ones by Souza et al. (2018), where men were the main reason for women to feel anxious during their mobility. Comparably, the women in my study evaluated (drunk) men, especially in groups or when they were secluded, as potential sources of danger and tried to keep their distance. In these instances, the people confidently take space, at times unaware that their presence and behavior is restricting the comfortable movement of others, specifically intersectionally marginalized women. In line with the results of Lubitow et al. (2020), these bodies creating the discrimination were not only fellow passengers but also members of the public passing by during the walks from and to the stations and public transport employees such as the ticket inspectors and bus drivers.

These dynamics show that mobility is not just physical movement from one place to the other but rather a social phenomenon. Here, the women's lived experiences provide a bridge between mobility and larger societal concerns such as racism, queerphobia, and Islamophobia that shape their journeys. Public transport mobility is deeply embedded in and producing societal norms, values, and power structures as reflected by the numerous accounts of the women moving through Munich via public transport. In line with Davidson's (2021) rhizomatic mobility where mobility is configuring values, public transport in Munich is configuring (im)mobility for women based on their sense of safety. Simply pushing the responsibility away from the public transport setting to general society dilutes the reasons and effects of such feelings of (un)safety; thus, it is crucial to remain conscious of the multifaceted nature of potential experiences and recognize the co-constructed nature of mobility and its interconnectedness with societal factors and individual identities as described in the previous section. Understanding that emphasizes the importance of shaping mobility solutions that go beyond physical infrastructure. Inclusive solutions should address not only the tangible aspects of transportation but also the socio-cultural and contextual elements that influence individuals' perceptions of safety.

5.3 Motility and Access to Munich's Public Transport

In the third section of the discussion, I elaborate how intersectionally marginalized women's motility is shaped by their sense of safety in urban space and then how space claiming eases access for fellow marginalized persons.

The findings highlight that a woman's ability to move freely within the urban space is linked to her sense of safety, which in turn is shaping her motility. Here, Kaufmann et al.'s (2004) concept of motility offers a concrete lens for understanding women's mobility. This concept enables to perceive mobility beyond mere movement – motility encompasses (1) access to different forms of mobility, (2) the competence to recognize and use this access; and (3) the appropriation of choices, including the option of non-action. Here, it might be beneficial evaluating each category of motility separately.

(1) The first category is influenced by the spatial arrangement of infrastructure, the accumulation of spatial policies, and socioeconomic status, consequently limited by the range of transportation alternatives. None of my participants narrated restrictions within the scope of their public transport usage. While for some financial reasons played a role in whether they used to acquire a ticket in the past, either because they were not able to afford or willing to afford the past costs, these concerns were no longer relevant for them due to the introduction of more accessible public transport tickets in Germany, such as the Deutschland-Ticket, costing 49€ per month for the general public and 29 € per month for students as well as the 365€-ticket for school students.

(2) The second category comprises physical ability, acquired skills like specific knowledge, and organizational skills. First, none of my participants had any restrictions to their physical ability

of moving through public transport. Second, while most of my participants freely and confidently navigated the public transport network in Munich in an organized way with years-long regular experience, Daha, who just recently moved to Germany was confused both due to lack of German skills as well as lack of familiarity with the structure of the suburban railways in Munich. However, this missing knowledge did not necessarily restrict her movements, as she still took public transport whenever she needed to move around Munich, using mobility apps in English to navigate the mobility landscape. Her ability to speak English and use apps provide the basis to improve her ease in movement with public transport.

(3) The final category refers to how actors evaluate the options based on their perceptions of needs, skills, and values. The literal access to public transport is only at times impacted by safety concerns. Here, positioning safety as a critical element of access within the motility framework sheds light on the barriers and facilitators that women encounter in Munich's urban mobility landscape. Safety concerns act as dynamic gatekeepers, influencing the choices women make regarding their mobility. Dark areas crowded public transport vehicles, or instances of harassment become barriers to access, limiting the range of choices available. Here, (un)safety considerations for women are not static; rather they fluctuate with time, location, and other variables. A pleasant waiting time at a bus station during the day might transform into a source of unease at night. An agreeable train ride on one day might turn into an uncomfortably crowded one on another. An enjoyable public transport usage might mutate into a cause for anxiety by the presence of one harasser. This fluidity of safety concerns equally stems from both the way that mobility is configured as well as the societal surroundings. A moment of insecurity can affect the rest of the respective commute as well as further one with negative anticipation. In this line, Sophie reported that she had stopped using public transport for a while after being verbally harassed in a bus and Daha refrained from using busses whenever she could because of previous communication difficulties with bus drivers. Also, the younger women Salima and Era tried to avoid using public transport, or generally moving outside their homes at night. This reflects findings by Stark & Meschik (2018), stating that experiencing frightening situations constrained women's travel behavior as well as by Yavuz & Melch (2010) according to whom safety-related problems have long-lasting effects for women.

Here, it is important to note that women's limited access to safe and comfortable public transport mobility is the consequence of values ingrained into public transport in Munich reflecting the norm of cis-heteronormative patriarchal colonial dominance in public space. As Levy (2019) states, it is crucial to consider that moving in public spaces without fear of physical or verbal attack has material and symbolic importance for women, ethnic and religious minorities, and LGBTQ+ communities. When the worriess access to public space is limited for intersectionally marginalized women, white male privilege to space is further reinforced. This is in accordance with Kern (2021), who explains how constrained movement for women enforces women's second-

class status in public space and Sheller's (2018b) notion that impeding a group's use of a means of movement is easing the other's use. In contrast, the presence of bodies that the women perceived as similar based on their situatedness led to them feeling more at ease. This was the case for all participants when surrounded by women, and specifically for the Muslim women, who cherished the presence of fellow women wearing the Hijab as well as other foreigners. This echoes the conclusions drawn in the research by Johnson & Miles (2014) stating how Muslim women in Brooklyn felt more welcome in settings where they would encounter other women wearing the headscarf or a mix of ethnic groups; reiterating the political meaning and weight of space claiming as concluded by Koskella (1997). Here, merely being present out in the public space as an intersectionally marginalized women alters the perceptions of fellow women similarly situated and enables a more equitable access to comfortable mobility. This resonates with findings from Beebeejaun (2017) concluding that inclusivity, access, and safety are negotiated in the interaction of space and people.

In short, the motility of the women who have participated in my study has been formed by their reported high level of sense of safety in interaction with lived experiences of unsafety that led to the (un)conscious implementation of safety strategies. Hereby, their access to Munich's public transport was mainly impaired due to a lack of feeling of ease and comfort in specific contexts and situations. It remains important to note that the intersectionally marginalized women moved freely most of the time, however, did not possess the desired levels of wellbeing in public transport unequivocally. Thus, literal access might have been limited only in concrete contexts; however, if I extend the meaning of access to a more welcoming, non-restrictive, comfortable notion of access, then it can be argued that this access was limited for all woman participants while using public transport in Munich.

5.4 Women's Safety Measures in Munich's Public Transport

In the fourth section of the discussion, I show how the strategies that the women public transport users implement are reflected in existing research based on the findings from the first stage of research where intersectionally marginalized women reported that they implement various strategies to secure their safety in public transport.

On the one hand, my research findings echoed many of the strategies mentioned in earlier research. One of those strategies is the avoidance of traveling under certain circumstances such as in the dark, to some stations, or with certain public transport modes, reiterating the findings by Kash (2019) and Stark & Meschik (2019). Also in concordance with their studies was the participant's wish for self-defense training. In addition, consistent with the results of Farina et al. (2022), some participants also reported additional planning for travels at night, as for example researching the routes to reduce transfer times and holding their phones to reach friends and family in case of feeling unsafe. Parallel to Kash's (2019) findings sitting and standing strategically

at public transport stations and in vehicles, with easy access to “safe” people like the drivers and fellow female passengers, was also a common strategy. Furthermore, the trans and queer women in my study affirmed the results by Weintrob et al. (2021) according to which a coping strategy was passing as non-trans and non-queer. Although, for the participants in my research this was often not an active strategy but rather coincidental and could be attributed to their personal style choices. Besides the individual strategies, the infrastructural and political interventions proposed by my participants were also in concordance with previous research. Parallel to the research conducted by Gardner et al. (2017), Loukaitou-Sideris (2014), and Pedersen (2020), the women in my study valued personnel surveillance by security employees and police over environmental interventions in the form of video surveillance and additionally, they also called for public awareness campaigns.

On the other hand, opposed to the findings by Kash (2019) and Weintrob et al. (2021), switching to other, more expensive modes of transport such as taxis was not a common safety strategy for the participants in my study. This might not be the case as, despite their lived experiences, the participants evaluated their sense of safety in Munich’s public transport as high, thus generally not seeing a necessity to switch modes. This does not resonate with findings from other places such as cities in Austria (Stark & Meschik, 2018) and Accra, Ghana (Okafor et al., 2023), where people did evaluate their sense of safety in mobility as low(er) safe after certain lived experiences of unsafety.

5.5 Gender and Intersectionality in Munich’s Public Transport Planning

In the fifth and final section of the discussion, I show that there is a disconnect between intersectional safety concerns as identified in the first part of the study and current planning strategies as identified in the second part of the study.

The findings from the focus group with the mobility strategist and researcher show that nuanced considerations on sense of safety were not reflected in the perspectives of the mobility planners in Munich; they rather advocated for the notion of *safety for all* instead of recording data for different kinds of marginalization and responding accordingly. While the topic of gender mainstreaming was mentioned in the initial document for the city’s mobility strategy, the respective sub-strategy does not exist yet and the findings from the first focus group do not yet point towards an implementation in practice. This prioritization of considering everyone as equal in the eyes of public transport planning and the carefulness in not portraying women as in need of additional protection reflected the findings of Levy (2009), according to which planners often prioritized recognition rather than focusing on addressing sources of exclusion and oppression.

In addition, the conceptualization of gender mainstreaming would fail to account for intersectional forms of marginalization considering the multiplicity of gender, sexuality, *race*, nationality, ethnicity, age, and class, which is a much-needed approach to address the

shortcomings of gender mainstreaming as also stated by Lacey et al. (2021). This intersectional approach does not seem to be at the forefront of explicit future safety planning incentives in Munich. This corroborates the findings of Haas (2022) who concluded that issues on mobility justice are most often only implicitly mediated in Germany's path towards sustainable mobility transformation. In this line, there was no reflection of the call for action in the conclusion of the study by Fröhlich's (2021) on hate criminality in Munich, which advised to take steps to prevent offenses in public transport motivated by prejudice against people with lower socio-economic resources, who were visibly Muslim, of foreign origin and were not white. Even though this study was funded by the city of Munich's democracy department, it seems its contents had not necessarily moved across departments as this specific need was not confirmed by the mobility strategist.

Beyond these considerations of intersectionality in mobility planning, it is crucial to note that the SWM/MVG and mobility department perspective is informed by the high levels of reported safety. To protect and further improve these high levels of safety, there is extensive efforts and incentives, as can be seen in the number of ongoing and planned measures including and not limited to video surveillance at stations and within vehicles, a continuously growing body of trained security staff and planned introduction of apps. These measures are meant to increase both safety and sense of security for the public transport users and are in line with the expectations for further measures stated by the participants in the first stage of my research. This is also the case for the implemented and further planned public awareness campaigns, both by the city and SWM/MVG as well as in collaboration of both. While all other measures might work equally well for different kinds of safety concerns, for the public awareness campaigns it is specifically important to consider the intersectionality of marginalization and respective representations. Here, the needs go beyond initiatives by mobility planning to societal improvements made possible through collaborative efforts in the entire society. Structural changes promoting equality in society are required to improve intersectionally marginalized women's (sense of) safety.

6 Conclusion

In the pursuit of understanding and addressing the experiences of (un)safety for intersectionally marginalized women in Munich, this thesis embarked on a comprehensive exploration to answer the research questions of how intersectionally marginalized women experience safety during their day-to-day mobility on public transport in Munich and in how far intersectional issues related to safety, as identified in the first part of the study, are reflected in the current mobility planning strategies and practices of the city of Munich. The goal was to fill in the gaps in previous urban mobility research which lacked a focus on intersectional gendered safety experiences in public transportation.

To do this, I employed a multi-method two-stage approach. For the first stage I used mobility diaries, go-alongs and semi-structured interviews with women participants who were Black, Brown, Asian, North-African, Hindu, Muslim, Foreign, non-German speaking, lesbian, trans*, young, old, and more to delve into the (un)safety experiences of intersectionally marginalized women. For the second stage, I conducted focus groups and personal communication with a city representative, a SWM/MVG mobility researcher and two women tram drivers to understand the mobility planners' current safety perspectives and measures. To interpret the findings, I drew from feminist and post-colonial STS and mobility studies concepts including situated knowledges, the place-ballet, the rhizomatic understanding of mobility and access and motility.

Regarding the first research question on how intersectionally marginalized women experience safety during their day-to-day mobility with public transport in Munich, I explored how these women navigate Munich's public transport within the complex interplay of their identities. Their personal narratives on sense of safety are influenced by factors such as gender, *race*, ethnicity, nationality, religion, age, and sexual identity as these factors may lead to concrete lived experiences of unsafety such as sexualization and harassment by fellow passengers and others. The participants embodying their diverse identities traverse Munich's public transport system as unique material-semiotic entities where their knowledge of safety is created in their interactions within a place and time. Their experiences are interwoven with their individual life stories, upbringing, and cultural contexts, creating a mosaic of perspectives which in part is based on their own biography of lived experiences as well as their upbringing and on whether or not they have been confronted with narrations of unsafe situations by family and friends. Safety considerations for these women are not uniform; instead, they fluctuate with time, location, and other variables in the specific socio-cultural dynamics of Munich, where for example the time of day or crowdedness in a certain place can lead to an increase or decrease of the level of sense of safety.

Regarding the second research question, I found that there is a disconnect between intersectional safety concerns as identified in the first part of the study and current mobility planning strategies. Mobility planning in Munich lacks explicit considerations of intersectionality and specific needs based on various forms of marginalization and rather focuses on general safety for all, relying on the reported high levels of safety. Here, an integration of diverse perspectives, acknowledging the fluidity of safety concerns and explicit incorporation of intersectional considerations into future mobility planning in Munich might prove beneficial.

In summary, intersectional marginalization significantly shapes women's safety experiences in Munich's public transport. The study unveils the multifaceted nature of these experiences, emphasizing the interplay of individual identities, public transport's context, and

societal structures. To enable a genuinely equitable public transport environment, the complexity of intersectional safety considerations must be positioned at the core of (mobility) planning.

The significance of this research lies in its potential to unveil the often-overlooked narratives within the realm of urban mobility. By focusing on the experiences of women of color and women from the LGBTQ+ community across diverse social classes and age groups, the research goes beyond surface-level discussions. It aspires not only to understand the challenges faced by these individuals but also how these challenges result in unique barriers to comfortable mobility and how mobility planners may respond to those barriers.

Here, it is noteworthy that the participants, specifically from the first stage of the study, were enthusiastic and open in engaging with me as a researcher and the research process. Throughout the data collection phase, all participants exhibited readiness to share their experiences, challenges, and perspectives related to public transport in Munich, which could be explained by resonance to me as a fellow intersectionally marginalized women, fellow student or similar in age, and additional colloquial conversations before and during the study, especially the go-alongs. This eagerness to participate contributed significantly to the depth of the collected data.

However, it is important to acknowledge that the study is subject to several limitations. Among those is the possibility of varying degrees of self-censorship for diverse reasons as well as potential researcher bias. Besides, the methodology's reliance on two-week mobility diaries during the summer period poses a limitation as it demands a substantial time commitment from participants, potentially deterring individuals who are unwilling or unable to allocate such a significant period for documentation. This constraint may influence the composition of the sample, potentially excluding those with time constraints. Also, the experiences of the respondents predominantly represent a limited number of younger and well-educated women, who could communicate in English or German, in a certain time in Munich. This linguistic bias may overlook perspectives shaped by a lack of access due to language barriers. Besides, while the study provides valuable insights into the experiences in the specific context of a certain time in Munich, it is crucial to recognize that urban dynamics, public infrastructure, and societal attitudes can vary across different geographical locations and over time. A further limitation is the lack of representation of women with disabilities. The study acknowledges that certain physical considerations may affect the safety experiences of women with diverse body types, potentially overlooking unique challenges faced by individuals with mobility concerns or disabilities. The limited representation poses a constraint on the generalizability of certain findings, given the broad scope of my interest in all women's experiences. Furthermore, the underlying study has centered on women's experiences, however, recognizes the need for a more nuanced understanding of diverse gender experiences including the feelings of (un)safety of men and non-binary people. Additionally, the focus was primarily on the users, consciously excluding

perspectives from drivers, security workers, and other stakeholders, which limits the comprehensiveness of my insights. The study recognizes that individuals in various roles within the public transport system have valuable perspectives and experiences that contribute to a holistic understanding of sense of safety in public transport. Moreover, the mobility planning perspective was limited to the city and the city's subsidiary SWM/MVG, omitting data from DB and MVV due to lacking participation in the focus groups. While it is reasonable to expect that similar notions and challenges may arise there considering the interconnected nature of public transport services and based on the responses of the SWM/MVG researcher referring to the collaborative nature between SWM/MVG and DB within MVV, conducting further research with these two stakeholders might be beneficial for a more comprehensive perspective on Munich's public transport system.

In summary, this study offers valuable insights into the experiences of certain intersectionally marginalized women's experiences and mobility planners' response. However, the identified limitations stress the significance of future research endeavors that aim to achieve broader demographic representation and delve into diverse perspectives on sense of safety in urban mobility.

7 References

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8 Annex

Appendix A Mobility Diary Daily Questions

Today's route

- Was it a route I was familiar with? Where did I drive to? How often do I travel this route?
- Which means of transportation did I use? Were there any changes to how I normally travel this route?
- Did I drive today's route alone or with another person? What did I do during the trip?
- Are there any stops I avoided today? Why?

Perception of Safety

- What am I grateful for on my commute today?
- Was there a moment when I felt surprisingly comfortable?
- Were there moments when I felt uncomfortable? Why? What distinguished those moments?
- Did I change my planned behavior because I was worried about my safety?

Coping strategies and precautions

- What strategies did I use on today's trip to ensure my safety when using public transportation?
- Did this make me feel safer?

Encounters

- Did I have any particularly pleasant or unpleasant encounters on today's route?
- Was I surrounded by many people or alone on my route? What feelings did these situations trigger in me?
- Did I encounter uniformed personnel on today's route? How did I feel in their presence?

Appendix B Go-along Focus Points

- Route selection: Why do participants choose this route? Do you take detours due to safety concerns or other factors? What restrictions do they face on their route? How do they navigate this challenge? What stress factors would they like to avoid but cannot? For what reason?
- Environment: What infrastructural conditions could contribute to their sense of security? To what extent do they feel more comfortable in certain environments than in others? How do they experience the lighting situation? How many people are they surrounded by?
- Interactions: How do participants interact with passers-by* and passengers*, drivers or security staff?
- Safety precautions: What behaviors may indicate safety concerns?

- My presence: What does my presence change? In what way did they experience the journey differently as a consequence?

Appendix C Semi-Structured Interview Guide

Introduction

- What have you realized by keeping a mobility diary? What surprised you, what did you not expect?
- Have you noticed any differences in your experiences during the period you have recorded in your mobility diaries?
- Are there any other limitations or challenges to your mobility that you have not recorded in your diaries?

Perceptions of safety

- How would you describe your general perception of safety when using public transport?
- Which places seem rather safe to you, which seem rather unsafe? How would you describe these places?
- Can you name specific incidents or situations from your mobility diaries where you felt particularly unsafe or uncomfortable?
- What would have to change to make you feel safer?
- How important is lighting to you? How important is video surveillance to you? In your opinion, do these contribute to greater safety?
- What do you do when you drive a route for the first time? How do you prepare yourself?
- Are there any situations in which you yourself have been perceived as an unsafe factor?

Coping strategies & mobility behavior

- What do you do to ensure your safety? Do you find these strategies empowering or limiting?
- When do you change your behavior or appearance to feel safer?
- Do you adapt your route to avoid or enable certain situations?

Interactions

- When have you felt more confident in the presence of other people, and when have you felt more insecure?
- Who do you turn to when you feel more insecure?
- How important is the presence of uniformed staff to you? Have you had any personal experiences with staff? To what extent did you feel supported? (Police, inspectors)

Suggestions for improvement

- What do you need to feel safer and more comfortable on public transport?

- What political measures, changes to infrastructure, etc. do you think could make a difference?

Conclusion

- Is there anything else you would like to add or do you have any questions about your experience or the study?

Appendix D Focus Group Themes

Collection of Data

- Level of knowledge on perceptions of safety: to what extent do perceptions of safety, including gender, ethnicity and sexual orientation, play a role in considerations / planning strategies?
- To what extent are there gaps in knowledge?
- What strategies are there to fill them?
- How often does this topic generally come up in your respective area/organization?

Measures and Solutions

- To what extent do the subjective safety needs and perceptions of women in particular (also affected by multiple discrimination) play a role in strategic / planning considerations?
- What measures and solutions are already being tested / what are the experiences with them?

Evaluation of Existing Measures and Future Goals

- How would you rate the success of your measures to date for the safety of women on public transport?
- Do you think that the safety concerns of women on public transport are sufficiently taken into account in the current mobility planning initiatives in Munich? Why or why not?
- What long-term goals and visions do you have to further improve women's safety on public transportation?
- How can we ensure that the safety measures are sustainable in the long term and have a positive long-term impact?
- What are your wishes regarding the social justice, participation and inclusion sub-strategy?

Public Relations and Awareness-raising

- What measures have been taken to raise public awareness of women's safety concerns on public transport? What is the experience with this?
- How can we improve awareness and education about this issue? What messages should be emphasized in public relations?

- Who puts this issue on the agenda, and in which context: Is it reported/requested by passengers? By staff? At another level?

Training and Sensitization of Staff

- What training and awareness-raising measures are in place for public transport staff regarding women's safety? How effective are these trainings?
- What recommendations do you have for improving staff training and awareness-raising?

Technological Solutions

- What digital solutions, apps or platforms can be developed or introduced to improve passengers' perception of safety and actual safety?
- What role can digital communication tools play in safety communication and how can they better support women on public transport?

Cooperation and Partnerships in Munich

- What cooperation currently exists between different organizations or authorities regarding women's safety on public transport?

Exchange of Experience with Other Cities

- Do you have experience of best practices and initiatives from other cities or countries that have contributed to improving women's safety on public transport?
- How can we learn from the experiences of other cities and apply them to Munich?

Conclusion

- What other aspects or concerns related to women's safety on public transport in Munich would you like to address in conclusion?

English:

Declaration of Authorship

I hereby declare that the thesis submitted is my own unaided work. All direct or indirect sources used are acknowledged as references. This paper has not previously been presented to another examination board or published.

German:

Ehrenwörtliche Erklärung

Ich erkläre hiermit ehrenwörtlich, dass ich die vorliegende Arbeit selbständig angefertigt habe. Die aus fremden Quellen direkt und indirekt übernommenen Gedanken sind als solche kenntlich gemacht.

Die Arbeit wurde weder einer anderen Prüfungsbehörde vorgelegt noch veröffentlicht.

Munich, 23.01.2023

Place and Date

Signature