Women's mobility

Literature review

Mobile Lives Forum

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Women's mobility

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Introduction

Never before have we travelled as much, as fast, as far and in so many different places as we do today. This intense mobility that characterises most of our lifestyles is the result of a continuous increase in travel speeds (by train, by car and then by plane) since the 19th century and the Industrial Revolution. Combined with decreasing costs, fast travel has become accessible to all. While mobility is a great source of freedom, it is also a source of stress, fatigue, negative externalities – motorised travel has a strong impact on the environment – as well as various inequalities. Indeed, not everyone has the same access to mobility: some people are required to travel intensely despite wanting to slow down (such as low-income individuals who are unable to live close to work), while others see their movements hampered or controlled (people with disabilities, migrants, victims of racial profiling, etc.). Women bear the full brunt of these inequalities in terms of mobility. Indeed, their lot in life has long been immobility and the domestic sphere while men have dominated the public sphere. Still today, women perform most household and family-related chores, thus impacting their mobility. Moreover, women still largely suffer the effects of male domination in a public space designed by and for men, as evidenced by the sexual harassment of women in the street which has been highly publicised since the 2010s and the #MeToo movement.

The Mobile Lives Forum wanted to understand the problems women face in their daily mobility practices. For this, we performed a review of the literature based on scientific articles, institutional documents, press articles and podcasts, to identify the various challenges related to gender and mobility. To understand the specificities of women's mobility, we will begin by reviewing the main findings coming from the field of gender studies (part 1). Identifying the main challenges related to gender is necessary to understand how they play out in the field of mobility. Then, we will look at how researchers have investigated the links between gender and mobility (part 2). This general context will provide explanations for the observed differences between men's and women's mobility practices - in terms of distance, range, purpose or even modal choice (part 3). It appears that women's mobility is firstly impacted by their participation in household and family chores (part 4), but also by a widely reported feeling of being unsafe in public spaces, due to their unwelcoming nature and the stressful situations they present (part 5). Finally, these findings will lead us to consider different solutions that have been implemented and reflect on their relevance (part 6).

1. Gender studies: an overview

For centuries, social differences and inequalities between men and women were viewed as natural and the result of biological differences. Ancient and Christian traditions provided a rationale for a division between the sexes, according to which men were in charge of public affairs while a woman's role was to give birth to the next generation. This opposition between private and public spheres was strengthened in the 16th and 17th centuries by a civil dimension that appears in modern political thought. However, despite the introduction of this third dimension and a greater emphasis on

human autonomy, women remained defined by their roles as wives and mothers and tasked with household affairs. The 1970s marked a turning point with regards to these traditional conceptions. With the feminist revolution applying the lens of male domination to all areas of life, female emancipation theorists argued for a reorganisation of the world, putting the private sphere on the same footing as the civil and public spheres. The outcome of this was an entirely novel social structure combining three domains that are no longer juxtaposed, but intertwined: the public-political, the private-social and the intimate. Women and men are now venturing into previously uncharted territory and this new order, according to Camille Froidevaux-Metterie, can be described as a "desexualisation of social coexistence" (Froidevaux-Metterie, 2015).

1.1. Gender: a definition

It was not until the 20th century that gender as a concept first appeared, at a time when women were starting to gain legal rights. By providing a term that was detached from sex, the concept of gender could break away from the naturalist conceptions that distinguished men and women according to biological criteria and assigned them differentiated social roles that were presented as natural.

From there, gender studies developed. It is now a field of research aimed at showing that gender is present throughout the entire social world, strongly structuring our subjectivity and intertwined with other power relations, such as race, age, and social class (Lépinard and Lieber, 2020). These works uncover the ways in which society is structured on a binary and hierarchical divide between men and women. "In short, the concept of gender designates the social, cultural, historical and psychic processes by which gender and sexual identities are produced, the mechanisms by which the boundaries between these identities are drawn and/or subverted, and the dynamics by which the power relations that underpin these identities and borders are perpetuated or negotiated." (Lépinard and Lieber, 2020).

Gender is the subject of many theories. There is no one single way of conceptualising gender but a variety of ways, depending on the approach or the disciplinary field. Different gender theories offer their own vision of identity, of the subject, of power, of social relations and of their transformation (Lépinard and Lieber, 2020). They each emphasise various aspects: work, sexuality, mobility, the body, social representations, norms, etc. But they all consider gender as a social construct and not as the result of biological, natural differences.

In their *Introduction to Gender Studies*, sociologists Laure Bereni, Sébastien Chauvin, Alexandre Jaunait and Anne Revillard (2020) propose to analyse the concept of gender through four dimensions:

- Gender is a social construct
- It is a relational process
- It is a power relation
- It is embedded in other power relations

1.1.1. Gender, a social construct

- **Sex and gender**

The first studies on gender opposed an essentialist vision according to which women and men have immutable characteristics based on their biological features. They highlight that throughout their lives, men and women are continually learning what behaviours are socially considered masculine or feminine. This echoes Simone de Beauvoir's famous quote in *The Second Sex*, in 1949: "One is not born, but rather becomes, a woman."

In the 1950s in the United States, a distinction was made between the terms "sex" and "gender." "Gender" came to designate the social construct as separate from biological "sex," as the notion of "sex" was still commonly being used, confusingly, with regards to the body, to psychology, to one's place in society, to genes and to the division of labour. The word "sex" led people to naturalise social inequalities between men and women by connecting them to a biological reality. Thus by distinguishing biology from social construct, the term gender challenged the legitimacy of power imbalances between men and women, by disconnecting them from anatomical differences.

According to Oakley (1972), "sex" refers to the biological distinction between male and female, while "gender" refers to the cultural distinction between the social roles, psychological attributes and identities of men and women. "The former is an invariant fact, the latter is contingent and can be modified by human action." (Bereni et al., 2020)

However, more recent works call into question the distinction between gender and sex, in particular the idea that sex is an immutable property devoid of all social construction. In 2015, a team of researchers in natural and human sciences co-authored a book entitled *Does my body have a sex?* [*Mon corps a-t-il un sexe?*], showing how gender beliefs have influenced research on sex (Peyre and Wiels, 2015). In 2016, philosopher Thierry Hoquet argued that even in biology, sex does not correspond to an invariant reality but to different conceptions, from anatomical sex, to genetic/chromosomal sex, to endocrine/hormonal sex, etc. The question of intersex also challenges the male/female dichotomy linked to biological sex.

- **Gender: the product of a bicategorised normative system**

Gender is associated with a system of norms, characterised by a duality between masculine and feminine, two sex categories delimited by a clear boundary. This bicategorisation forces individuals to adopt ways of being and acting that conform to the social definition of their assigned sex at birth. In 2018, the WHO (World Health Organisation) defined gender as "the roles, behaviours, activities, functions and opportunities that a society, according to its own representations, considers appropriate for men and women, boys and girls and people who do not have a binary identity."[1]

These norms are transmitted from one generation to another through a process of socialisation, defined by sociologist Muriel Darmon as "the set of processes by which the individual is constructed - we can also use the terms "formed," "modelled," "shaped," "built," "conditioned" - by the global and local society in which he lives, a process during which the individual acquires - "learns,"

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[1] *"Gender and Health"*[archive], at *www.who.int*

"internalises," "incorporates," "integrates" - ways of doing, thinking and being that are socially situated" (Darmon, 2016, cited by Bereni et al., 2020).

The influence of these norms on how individuals themselves construct their gender has been analysed by Judith Butler through the notion of gender performance. Based on her reading of works by John Langshaw Austin on the performative relation, by Kafka[2], by Foucault[3], but also by Merleau-Ponty on how experience constitutes the subject, she argues that gender is a social performance that is learned, repeated and executed rather than a biological given. By repeating certain acts, gestures and symbols associated with their gender, individuals constitute themselves as a man or as a woman. "Rather than considering the individual as the author of his actions, […] it is the whole set of actions he performs, repeated over time, that produce him as an individual" (Lépinard and Lieber, 2020). In other words, the traditional bicategorisation leads to differentiated norms which are then reproduced by the individual, maintaining the distinctions between both male and female genders and feeding the normative discourses that originally created these gendered constructions. Therefore, according to Judith Butler, norms produce the execution of behaviours attributed to masculinity and femininity, which then maintains normative discourses and reinforces the idea that there are natural genders.

Butler argues that individuals are recognised as persons only if they are gendered, if their gender performance is consistent with their assigned sex at birth and if their sexual orientation is directed towards the opposite sex. There are therefore "intelligible genders" (Butler, 1990, cited by Lépinard and Lieber, 2020). According to her, heterosexuality is a gender regulating practice, as it maintains the binary opposition between feminine and masculine. Gender is therefore inseparable from sexuality and desire.

If gender performance requires the constant repetition of actions, this calls into question the stability of gender identity; but in Butler's thinking, gender is a fragile identity that must be constantly maintained (Lépinard and Lieber, 2020).

These studies claim that the masculine/feminine bicategorisation is only a construct, thus paving the way for a multiplicity of possible identities which are not limited to a single feminine or masculine identity. There could be a diversity of femininities, a diversity of masculinities or even a diversity of non-binary identities. Moreover, while most societies describe gender as a hierarchical bicategorisation where men dominate women, other societies recognise the existence of a third category of people - a "third sex" as anthropologist Bernard Saladin d'Anglure put it in the 1980s.

1.1.2. Gender, a relational process

Gender studies then promoted a relational approach to the sexes, whereby the characteristics associated with one sex were constructed in opposition to those associated with the other. In

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[2] The Trial

[3] M. Foucault, Discipline and Punish, Gallimard, 1975; M. Foucault, The History of Sexuality, vol. 1, The Will to Know, Gallimard, 1976

modern western societies, femininity is associated with weakness, emotion, altruism, etc. while masculinity is associated with strength, reason, individualism.

Consequently, studies that focus on women and so-called feminine characteristics also analyse, to a greater or lesser extent, men and so-called masculine characteristics, and vice versa.

1.1.3. Gender, a power relation

Gender studies, particularly within sociology, then examined the social relations between the sexes as a form of power dynamic. They reveal hierarchical relationships, with an unequal distribution of economic and political resources and symbolic values. In this vein, French anthropologist Françoise Héritier criticises the systematic discrediting of values associated with femininity, compared to those associated with masculinity (Bereni et al., 2020). Christine Delphy, Colette Guillaumin and Nicole-Claude Mathieu describe a "patriarchal" system in which women's work and bodies are exploited. According to Camille Froidevaux-Metterie (2021), the patriarchy forces women to be doubly available, both sexually and maternally. In short, this is what Pierre Bourdieu meant by "masculine domination."

1.1.4. Gender is embedded in other power relations

Sex categories are not homogeneous, rather they intersect with other variables such as social class, skin colour, age, health, etc. This leads to different ways of experiencing gender relations, as they intertwine with various other power relations: this is what is known as intersectionality, a concept first introduced by American feminist and legal scholar Kimberlé Crenshaw. She developed this notion in line with Black feminism that focused on gender domination while simultaneously connecting it to other power structures, such as racism and class.

According to Elsa Dorlin (2008), individuals do not exist in one defined and definite identity but rather they find themselves involved in dynamic and complex power relations. The concept of intersectionality allows this complexity to be taken into account without isolating the different power relations. For example, women of colour are not racially oppressed in the same way as black men, nor are they subject to sexism in the same way as white women. They suffer from specific racist and sexist forms of oppression. In other words, there is not one single experience of sexism, or racism or any other form of power relation, but specific experiences that depend on the person and the diverse power relations they are involved in.

From these different dimensions, Bereni et al. define gender as "a system of hierarchical bicategorisation between the sexes (men/women) and between the values and representations associated with them (masculine/feminine)."[4]

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[4] L. Bereni, S. Chauvin, A. Jaunait, A. Revillard, A. Dézé, Y. Aucante, Introduction aux études sur le genre [Introduction to gender studies], De Boeck Supérieur, 2020

1.2. The emergence of research on gender

The term "feminist" appeared in Western Europe and Britain in the late 19th century, alongside campaigns for political rights for women, criticising masculinity and voicing women's aspirations to be active citizens in the new world born of the French Revolution. The aim was to extend the concept of "human rights" to women.

Studies on the topic of gender then developed in the 1970s in the wake of so-called second-wave feminist movements. These studies were initially the work of feminist activists, but they gradually became institutionalised with the development of education and research departments in universities, particularly in the United States.

In France, gender studies were first introduced through various other disciplines, notably sociology, anthropology and history, but also through human and social sciences: arts, literature, law, philosophy, geography, political science, economics, psychology… Eventually, universities set up dedicated departments and interdisciplinary teaching programs specialising in these issues, as in Switzerland in the late 1990s. However, the institutionalisation of gender studies remains to this day a fragile process. Since the 2010s, gender studies have regularly been the target of attacks by conservative movements. Such opposition stems from intellectual circles close to the Vatican, accusing "gender theory" of causing social and legal evolutions that they find reprehensible (same-sex parenting, same-sex marriage, trans-identities, etc.).

The term "gender studies" (and its equivalent variations) became widespread in the United States in the 1980s and in many other countries in the 1990s and 2000s, replacing "feminist studies" or "women's studies." In France, it appeared relatively late, in the early 2000s. Indeed, despite works on gender issues dating back to the late 1980s, the term was long deemed unsuitable for capturing the power relations between men and women.

1.3. Controversies

Since its inception, the field of gender studies has been largely heterogenous and plagued by numerous controversies.

For example, the sex wars of the 1980s in the United States pitted feminist theorists linking heterosexuality to the oppression of women against those who challenged the oppressiveness of sexuality and instead pointed out that different sexualities were stigmatised and hierarchically ranked, with some considered more legitimate than others.

In France, "materialist" feminists and "Marxist" feminists disagree on the link between capitalism and patriarchy and on the question of who benefits from women's unpaid household work - men or employers.

There is also a divide between those who defend the universality of male domination and those who focus on the transformations and diversity of gender experiences from one socio-historical context to another. This partition can be linked to differences between disciplinary fields: for instance anthropology, with its structuralist heritage, defends the universal and systemic character of male domination, while historical studies often emphasise how contexts can vary and sociology focuses

more on the processes by which gender is formed and reformed on a daily basis. These different fields seek to identify the social processes by which gender is reproduced and reconfigured in different contexts, rather than to pinpoint the origin of male domination.

Finally, there are disagreements among feminists surrounding the concept of intersectionality. As early as the 1970s, Black feminism accused American feminist theories of being ethnocentric, focused on the experience of white, heterosexual and upper-class women. These charges, which were later taken up by postcolonial feminist movements[5], led to the emergence of the concept of intersectionality. This issue remains a hot topic in France today, opposing the so-called universalist feminists who defend the unity of feminist struggles, and the postcolonial feminists who call for a recognition of the diversity of experiences and therefore of struggles. Over the past ten years, a community of Afro-descendant feminists has formed on social media, challenging mainstream feminism and accusing it of being the preserve of white women from the dominant classes who think they speak for all women. Like the African American feminists of the 1970s, these feminists accuse the dominant movement of ignoring issues faced by other women, especially those who are underprivileged and/or from minority races. They assert their ability to actively defend themselves, rather than needing to be defended by women whose social status and issues may be totally different from theirs.[6]

Conclusion

All these considerations bring to light the diversity of works on gender and the many questions they raise. In which areas and contexts are women subject to domination? Who benefits from this domination? If gender is a social construct, what is socially constructed? Is it the pressure to conform to the socially attributed characteristics of one's assigned sex at birth? The binary distinction between men and women? The injunction to be either a man or a woman, rather than both, or in between, or neither? While some feminists only challenge the hierarchy between masculine and feminine, many question the very existence of distinct roles. But all agree that the concept of gender, by differentiating itself from sex, allows us to decouple the social from the biological, and sheds light on the processes by which sex-based differences and inequalities in various spheres (school, work, family) are produced and renewed. As such, "the concept of gender appears […] to be a powerful instrument to denaturalise the social realm, making both individual and collective action possible" (Bereni et al., 2020).

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[5] Appearing in the United States in the 1980s, postcolonial feminism is a form of feminist thought that highlights the impacts (political, economic, cultural) of colonialism on non-Western women. It condemns both the androcentrism of postcolonial theory and the ethnocentrism of mainstream feminism.

[6] Bienaimé C., 26 August 2016, "*Ne nous libérez pas, on s'en charge*" [Don't free us, we'll take care of it], on the podcast *Grande Traversée: Women's power*, *les nouveaux féminismes*, France Culture.

2. Gender and mobility: the importance of traditional social roles

These traditional conceptions of the differences between women and men – in terms of nature, personality and social role – as well as the power relations they imply are particularly visible in the field of mobility. Indeed, this is a favourable place for the reproduction of gender inequalities, especially the domination of men over women. This has consequences on the characteristics of both men's and women's mobility practices, but also on their experience of mobility.

2.1. Women's long association with immobility

2.1.1. Differences based on specific masculine and feminine characteristics

Feminists have long shown that mobility, both as a practice and as a social value, is more accessible to men than to women. This is mainly the result of different representations. Men are seen as brave and adventurous while women are considered to be gentle and fearful. Therefore, masculinity is traditionally associated with mobility and femininity with immobility. Men engage in mobile activities such as travel, sport, adventure, walking at leisure, and they use modes of transportation like cars, boats, bicycles, trains, etc. In social discourse, male mobility is associated with positive values such as dynamism, progress and entrepreneurship (Clarsen, 2017). Conversely, women are assigned to immobility, to the private sphere; their movements are often monitored and their autonomy restricted. Studies carried out in Algiers highlight the impact of these constraints in the countries of the Middle East and North Africa: the *Zanqa* - the street - is the space for men, while the *Horma* - the indoors - is the intimate space reserved for women. There are virtual thresholds that govern women's movements. Based on this social organisation, one's relationship to the public space will be different; for instance, Khadidja Boussaïd's work reveals that men enjoy a local mobility through which they take possession of their neighbourhood as a place of community, while women travel into the city in the hope that their mobility might provide them with anonymity and freedom (Zitoun et al., 2020).

2.1.2. The role of the body in controlling women's movements

The body occupies a central place in this opposition between male mobility and female immobility. A study by Iris Marion Young in 1990, cited in Cresswell and Uteng (2008), illustrates this point. She found differences in the way in which male and female students physically move their bodies. When throwing a ball, for example, female students only swing their arms while male students use the whole body. According to her, women behave like body-objects (Merleau-Ponty, 1962) instead of behaving like body-subjects. More recently, Anne Jarrigeon (2019b) observed that from an early age, women's mobility is constrained by a discipline that does not encourage movement: little girls are made to wear skirts, forcing them to keep their legs together and watch out for how other people look at them; similarly, high-heeled shoes, which are a specifically feminine object, require a certain skill, a learning curve, that favours neither speed nor fluidity of motion. These elements constitute "a way of normalising women's bodies to a disciplinary gaze. And this is both the gaze that they will cast on themselves, and more importantly the anticipated male gaze" (Jarrigeon, 2019b). Camille Froidevaux-Metterie (2021) also argues that women are forced to be sexually available and subject

to an obligation imposed by men to be beautiful and desirable. According to her, the female body becomes the sign of a constant reverence to the hierarchy of the sexes and is therefore always a primary place of male domination[7]. In Algeria, control over the bodies of mobile women is exerted by "controllers," men who have authority over a woman by virtue of a family link (husband, father, cousin, son) or even local children from the neighbourhood (*Ouled el Houma* in Algeria) who also exercise close control over their mobility (Zitoun et al., 2020).

2.1.3. Different mobility roles that reproduce inequalities between women and men

According to Cresswell and Uteng (2008), the mobility differences between women and men maintain the power relations that produced them: "Understanding mobility thus means understanding observable physical movement, the meanings that such movements are encoded with, the experience of practicing these movements and the potential for undertaking these movements. Each of these aspects of mobility – movement, meaning, practice and potential – has histories and geographies of gendered difference. Each of these is in some way constructed in a gendered way and each, in turn, contributes to the production, reproduction and contestation of gender itself. How people move (where, how fast, how often etc.) is demonstrably gendered and continues to reproduce gendered power hierarchies. The meanings given to mobility through narrative, discourse and representation have also been clearly differentiated by gender. Similarly, narratives of mobility and immobility play a central role in the constitution of gender as a social and cultural construct. Finally, mobilities are experienced and practiced differently." (Cresswell and Uteng, 2008).

2.1.4. The transgression of these social roles and imposed rules

Because these gender norms and representations have relegated women to second place, many women have expressed satisfaction in transgressing them, as far back as the end of the 19th century, by for instance taking up cycling. Susan Hanson (2010) recalls the case of Frances Willard, a 19th century feminist who learned to ride a bicycle aged 53, seeing it as a means of advancing women's social status and claiming her right to mobility. In doing so, she found a way to subvert the corset she had been forced to wear since she was young, a garment that was designed to hamper her movements at a time when the idea of women moving around independently was considered unseemly. Another example comes from the history of tourism, which in the 19th century was linked to exploration and conquest and therefore to masculinity. The Grand Tour, for instance, appeared in Western countries in the 19th century and was reserved exclusively for men. But as Cynthia Enloe (1989) points out (quoted by Cresswell and Uteng, 2008), women have long played a central role in the tourism industry, in which 75% of the workers are underpaid and female, and which has long

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[7] Froidevaux-Metterie C., January 2014, "Rediscovering the subject of feminism: for a phenomenology of the feminine," CippaPhilosophie, youtube.com.
However, as Camille Froidevaux-Metterie points out, by working on her appearance every day, a woman chooses to represent herself as a subject and not as an object, and therefore places herself in a process of self-improvement. Indeed, through this daily quest, the woman shows that she values herself as a being worthy of being loved, that is, worthy of being embellished. This beautification is therefore the opposite of alienation.

been associated with sex and prostitution. In the late 19th century, the Englishwoman Mary Kingsley travelled to Africa mostly without a male escort, transgressing the norms of gendered mobility – although she upheld those of imperialism. This example shows the intertwining of various dimensions: gender, ethnicity, class, etc. We can also cite Alexandra David-Néel who travelled to India and Tibet in the early 20th century.

More recently, Zitoun et al. (2020) have shown that women in Algiers try to be mobile outside of their homes, in order to escape the household and, like men, take advantage of networks that are outside of their local neighbourhood. To do this, while formally respecting the rules that govern their mobility in public spaces, and to reassure society or their "controllers" about the legitimacy of their movements, they manage to subtly circumvent these injunctions by employing - and often subverting - various sets of behaviours and resources, both material (like clothing) and immaterial (like social media networks). For example, using a car allows women to take full advantage of a city's services, all the while appeasing their "controllers" who want to keep them removed from the presence and gaze of other men in the public space. The car thereby serves as a kind of metal veil, protecting women's honour. To be mobile, women also wear certain clothes and carry certain devices aimed at reassuring their "controllers": they put on a veil or carry their mobile phone in order to be reachable at all times. Indeed, if a woman does not answer her phone, her "controllers" ban her from going out. Therefore, carrying a mobile phone allows them to keep their "controllers" at bay. These strategies deployed by women on a daily basis bear witness to the efforts women make to claim new spaces despite the weight of traditional conceptions (Zitoun et al., 2020).

2.2. An overdue interest in the link between gender and mobility

According to G. Clarsen (2017), despite obvious connections between gender norms and mobility issues, feminist works – both in their analyses of gender inequalities and in their efforts to change the status quo – have been insufficiently taken into account in the field of mobility research. Yet, feminist advocacy about women's mobility issues was a core element in the emergence of the "mobility turn." For example, Urry's writings on mobility echo feminist arguments on body movement. In Urry's works, gender is seen as a central factor of inequalities, even though he does not analyse this point in depth. The same goes for other publications that are rooted in the mobility turn: gender is recognised as a factor of inequality, yet there are no articles developing this subject in the journal *Mobilities* (Clarsen, 2017).

However, the question of gender has gained importance in mobility studies, particularly in the English-speaking world (Jarrigeon, 2019a). In the 1980s and 1990s, researchers in cultural geography conducted an in-depth review of their discipline, which led them to increasingly analyse mobility as a socially constructed phenomenon. As such, they were pioneers in studying the relationship between gender and mobility. In particular, some British works in cultural geography showed that people's movements take on meaning in certain specific social contexts, including those in which the relationship between men and women is marked by power imbalances (Clarsen, 2017).

According to Susan Hanson (2010), there are two major approaches within this field of research: the first focuses on gender and how mobility shapes it, while the second focuses on mobility and how it is impacted by gender. In the first approach, which studies how gender is shaped by mobility, a body

of work allowed researchers to understand how mobility and immobility were involved in the creation, reinforcement and meanings associated with gender practices. Researchers within this approach have conducted detailed case studies in many different regions. They relied on the opposition between mobility and immobility at the heart of traditional ideologies, showing how men have long been associated with public outdoor space and mobility, while women have traditionally been associated with the private indoor space and immobility. Some of these works have revealed how women are deprived of mobility and excluded, and have insisted on how mobility can be empowering, without questioning whether women's immobility was chosen or forced. Others have shown, however, that immobility can favour women's integration within a neighbourhood with many resources – childcare, social resources, etc. However, Susan Hanson criticises these works for emphasising gender over mobility, for highlighting the gendered dimensions of mobility practices without analysing the question of mobility in finer detail: according to her, these analyses only consider the distinction between public space and private space - or the opposition between exterior mobility and indoor confinement - without going into any detailed examination of why or how women perform their trips. These works were essentially based on qualitative approaches and focused on the household, the family, the community - neglecting the broader spatial environment (Hanson, 2010).

Conversely, still according to Hanson, studies that belong to the second approach - that deals with how mobility is impacted by gender - have tended to hold a simplified view of gender while paying a lot of attention to mobility. These studies have been mostly quantitative. They reveal in particular that women's mobility practices have been more spatially restricted than those of men, due to their workplaces being closer to home, or due to a greater propensity to work from home. For Susan Hanson, these studies did not delve deep enough into gender processes, including power relations and the processes by which gender identity is formed and transformed.

Hanson therefore calls for an end to this segmented system in favour of an approach that centres around the question of sustainability and does not neglect either of the two notions of gender and mobility. She points out that in many contexts, women travel more by foot and travel fewer kilometres in motorised vehicles than men, and that therefore their mobility practices have a lower carbon footprint. This could pave the way for her suggested approach centred around sustainability. However, she notes that since the notion of fairness is also central to sustainable development, the fact that women have fewer opportunities for mobility than men is problematic. Hanson therefore notes that researchers must question whether this lesser mobility is actually chosen or constrained, and whether it is experienced as pleasant, empowering and sustainable or as exclusionary and enslaving. To answer these questions, from the perspective of an approach centred on sustainability that analyses gender and mobility in all their complexity, Hanson recommends relying on quantitative and qualitative approaches. She insists particularly on the need to consider several elements: the diversity of geographical and social contexts; the individual's integration within the household, family and community; the built environment; transport infrastructure; institutions; levels of digital access; cultural norms and expectations, etc. To be effective, the decisions that need to be taken must be adapted to the relevant context and informed by one's knowledge of the local culture and mobility practices (Hanson, 2010).

In the French-speaking world, scientific works on gender and mobility arrived later and were scarce. English works spread less in the French academic world, even less so among professionals in the mobility field (Jarrigeon, 2019a). Nevertheless, Anne Jarrigeon (2019a) mentions a "spotlight effect" on women's status, driven by major international movements that raised the collective awareness about gender inequalities in different areas of society. However, this heightened awareness hides a neglect for the specificities of women's mobility and the causes of these specificities. Anne Jarrigeon even points out what she describes as a "deconsideration" for these gender and mobility issues and calls for them to be given greater visibility, by uncovering them across all disciplines in order to better grasp their full complexity (Jarrigeon, 2019a).

Conclusion

For centuries, women have been associated with the private sphere and men with the public sphere. This assignment to differentiated social roles is linked to a conception of femininity and masculinity according to which women are seen as more gentle and fearful – therefore better suited to taking care of the children and the house – while men are seen as more powerful and adventurous – thus better suited to managing the public sphere. These traditional conceptions have a direct impact on mobility and on women's place in the public space. However, it took a long time for scientific research to combine questions relating to gender with those relating to mobility. In recent decades, these works have revealed many interdependencies between gender norms and the various differences and inequalities in terms of mobility. However, combining gender and mobility in this way presents one major difficulty: that of properly considering and thoroughly analysing both dimensions equally. We will now present in greater detail the differences brought to light by many studies on the mobility practices of women and men and provide some explanations of these differences.

3. Men and women: different mobility practices

3.1. Female mobility practices that are more restricted and functional

At the end of the 1990s, Jacqueline Coutras noticed that male and female mobility behaviours had tended to become homogenised in all northern European countries. Women gave themselves the means to access areas that were further and further away from home. Like their male partners, they increased the amount of time spent away from home - to work, to go shopping, to have fun. In 1989, the French National Institute for Transport and Safety Research (formerly INRETS, then renamed IFSTTAR and now Université Gustave Eiffel) estimated that mobility differences between men and women were diminishing.

However, Jacqueline Coutras criticises the fact that such studies focus too much on the amount, duration and mode of trips, overlooking clear differences between the mobility practices of men and women. In the final two decades of the 20th century, men and women shared roughly the same number of trips and travel times, but women travelled significantly shorter distances - approximately

25% less than men (Coutras, 1997). Moreover, in the existing statistics, all travel purposes that are not related to work or school are grouped together in the same "Other" category: shopping (daily, weekly, exceptional), leisure, sport, walks, visiting relatives, shows, etc. This prevents any refined analysis of the differences between the mobility practices of men and women.

Ten years later, in 2010 in Paris, the INSEE census and the Global Transport Survey found that even women with an equivalent status to men travel shorter distances (12 km for women compared to 15 km for men on the day of the survey). However, according to the creators of the website *Les Paris du Genre*, mobility surveys have long ignored the practice of walking since their purpose has been to help plan major transport infrastructures. Yet, women walk more than men on a daily basis and therefore their movements have often been omitted by surveys[8].

Women's mobility practices are therefore shorter, slower, but also more complex and more constrained. This complexity is due to the fact that women tend to chain several activities during the same trip, related to their responsibility for many household tasks (see part 4) (Jarrigeon, 2019a).

Research has also shown that men and women have different practices in the public space[9]. For men, these spaces are more for relaxation and sociability: they meet there and stop there, while women are more in motion, busier and very often crossing public spaces without stopping. While this may be due to their sense of unease in public spaces (see part 5), it may also result from their schedules, with them being busier with the many household and family tasks they perform (see part 4). As a result, they venture into the public space for very specific purposes: commuting, shopping, escorting children or elderly people, etc. For the creators of the website *Les Paris du genre*, the items they carry when in public spaces - handbags, shopping bags, baskets, shopping trolleys, children's schoolbags, etc. - are like "extensions of their own bodies"[10].

3.2. Differences in modal choice and equipment

3.2.1. Cars

First of all, driving a car has long been associated with masculinity. In the United States, when the automobile became more widespread, slower alternatives were designed and developed for women. Electric vehicles, for instance, were originally considered by some to be well suited for women because they were safe, slow, and practical for social and household tasks, as Virginia Scharff points out in *Taking the Wheel: Women and the Coming of the Motors[11]*, cited in Cresswell and Uteng (2008).

In the 1980s, the number of two-car households increased, giving more women access to a motor vehicle. But some disparities persisted. As Marie-Axelle Granié points out, in most industrialised countries today, men are still most likely to be in the driving seat, while women are most likely to be

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[8] Parisdugenre.fr

[9] Parisdugenre.fr

[10] Parisdugenre.fr

[11] Scharff V., *Taking the Wheel: Women and the Coming of the Motors*, UNM Press, 1992, 219 p.

passengers (Granié, 2020). In Île-de-France, 70% of women have a driving license, compared to 82% of men (Centre Hubertine Auclert, 2019).

3.2.2. Public transport

Several studies show that women are also the main users of public transport (Rosenbloom, 2006, cited in Hanson, 2010; Cresswell and Uteng, 2008; Granié, 2020). In Brazil, women represent 58% of public transport users (Tillous, 2017). In Île-de-France in 2016, across all modes of public transport, women represented 55% of users and men 45%. On buses, the difference is even bigger: 64% of bus passengers are women (according to a study by STIF on the use of public transport, 2016, quoted by Ville de Paris, 2016).

In a 2005 article based on data from the 1992 Île-de-France Global Transport Surveys and interviews conducted in 1998 with 20 women living in Île-de-France, Frédérique Prédali observed that women used public transport more often before the birth of their first child and were also less motorised. Women often opt for a car when becoming mothers and avoid public transport while their children are small. For Frédérique Prédali, women do so because it is difficult to take small and slow children on public transport and because cars are very practical to transport cumbersome baby items (diapers, bottles, etc.). However, when their children grow up and are able to walk better and for longer, the women in the surveys report being more willing to use public transport again (Prédali, 2005). The transport offer in Île-de-France therefore allows users to alternate between their car and public transport, which some mothers prefer for commuting.

Women become more demanding of public transport when they have young children. They are particularly reluctant to take the RER, because of the "long corridors and overcrowded trains" (respondent, Prédali, 2005). According to one respondent, "taking the RER with children in strollers is a complete nightmare: […] You [have to] go down the stairs, pass the barriers while carrying the baby and the heavy stroller, then go up more stairs" (respondent, Prédali, 2005). More anecdotally, other mothers interviewed fear exposing their children to poverty by taking them on the Paris metro.

Although these findings are old, they are still likely to reflect women's current experience, since women remain more often in charge of childcare than men (see section 3.4.).

3.2.3. Cycling

In France, women ride bicycles less frequently than men. According to the 2019 People's Mobility Survey [Enquête Mobilité des Personnes], 1.5% of women use a bicycle as their main mode of transport, compared to 4% of men. The gap is particularly wide among younger people: between the ages of 6 and 17, boys are almost 6 times more likely to use a bicycle as their main way of moving

around[12]. According to the Active Mobility Observatory [Observatoire des mobilités actives] (2013), girls learn to ride a bike later than boys: 39.8% of girls learn before the age of 6, compared to 47.2% of boys. At a local level, a 2017 survey carried out in Bordeaux under the supervision of Yves Raibaud revealed an uneven distribution of men and women among cyclists in the city, with women representing only 38%.

However, a study by the Prefecture in Île-de-France shows that the proportion of female cyclists has grown since the lockdown with the creation of "corona cycleways," going from 36% before the spring of 2020 to 41% after 11 May 2020[13]. This seems to confirm that a secure infrastructure promotes women's cycling. Overall, we see a higher proportion of women cyclists in territories that are pioneering in terms of planning and cycling policies (Buehler and Pucher, 2021). An international study, carried out in 11 countries and published in 2021, found that in regions where the modal share of cycling exceeds 7%, women cycle just as much, if not even more so than men. In the Netherlands, for example, women ride their bike for 28.2% of their trips, compared to 0.6% in the United States (Goel et al., 2021).

The survey conducted in Bordeaux by Yves Raibaud (2018) shows that women cycle mostly at the end of the afternoon (leaving work, shopping, end of school), while men cycle more during leisure hours (evenings, Sunday afternoons). At night and in rainy weather, 78% of cyclists are men, which can be explained by women's greater fear of falling or of being in an accident, but also by the fact that women feel more unsafe at night. The study also shows that women cyclists carry more items (luggage, shopping bags, jackets, umbrellas) and are better equipped for transport (luggage rack, child seat, panniers, baskets, trailers or cargo bikes), while men opt instead for a backpack. Men are also twice as likely to carry nothing else and three times less likely to have a baby carrier (Raibaud, 2018). For women, who still bear most of the burden for household chores and escorting family members, all these cumbersome objects and constraints can be an obstacle to cycling.

Sociologist David Sayagh studied the socialisation of cycling in his thesis, and showed how it largely contributes to explaining the differences in cycling practices between girls and boys. Noting that teenage girls cycle significantly less than teenage boys, he conducted a survey of teenagers and of their parents to study how girls and boys are taught to use bicycles. His research highlights important differences between girls and boys. From a very early age, girls are told by their parents, peers and even the media to be careful, to avoid exposing themselves to risk, to not be too mobile, to adopt behaviours corresponding to the norms associated with femininity; meanwhile, clothes that are culturally associated with femininity (skirts, heels, etc.) are often unsuitable for cycling. Conversely, boys are encouraged to take risks, to play sports, to go out. As a result, girls have fewer skills and internalise their vulnerability, which in turn leads them to go out less than boys and avoid exposure to risk. Ultimately, this strongly limits their opportunities for cycling (Sayagh, 2018). Another study (Carrard, 2021) adds that negative representations about women cyclists – as being slower, less

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[12] BL Evolution, "Vélo et genre : penser des politiques cyclables plus ambitieuses" [Cycling and gender: thinking about more ambitious cycling policies], 7 July 2022.

[13] Prefect of the Île-de-France Region, December 2020, "Pistes cyclables provisoires en Île-de-France. Bilan régional de la démarche après six mois : des cyclistes au rendez-vous des réalisations mai à octobre 2020" [Provisional cycle paths in Île-de-France. Regional assessment after six months: cyclists using the facilities May to October 2020.]

confident, taking up too much space, etc. – also reinforce their hesitation to opt for this mode of transport.

These differences are however mitigated in higher socio-economic environments where women are more inclined to cycle, as it can be seen as a social marker by which they distinguish themselves, by performing an ecological mobility practice or by controlling their bodies and health (Sayagh, 2018). Conversely, many women from underprivileged backgrounds, especially immigrants, have never learned to ride a bike (Segert and Brunmayr, 2018).

Promoting cycling among women therefore requires improving the quality of cycling facilities, which should be adapted to the different needs and expectations of their various users - by enabling different speeds to coexist, favouring local cycling infrastructure, ensuring cycleway safety, etc. But it also requires a deeper investigation into the effects of socio-cultural influences on women's cycling.

3.2.4. Walking

Mobility surveys show that women tend to favour walking over other types of transport (Jarrigeon, 2019a). Yves Raibaud's case study on Bordeaux focused on women's walking practices. Studies carried out in Bordeaux in the 2010s showed that the practice of walking among women was strongly conditioned by the location (certain streets or neighbourhoods were either avoided or preferred), by the time of day (women are much less likely to walk at night), or by the day of the week. How a person moves through a city also depends on whether or not they are with children: accompanying small children or getting around with a stroller can be very difficult in certain places because of poor accessibility (width of sidewalks, presence of public toilets, etc.).

3.2.5. Carpooling

Yves Raibaud's survey in Bordeaux also focused on carpooling. While women carpool more than men, they tend to be more cautious in the choice of driver and passengers, especially younger women. Studies carried out in Bordeaux's metropolitan area also show that carpooling is poorly suited to the needs of mothers who are more likely than men to have children or shopping with them (see point 2.2.) (Raibaud, 2018).

3.3.   Gendered differences in mobility behaviours

In addition to differences in modal choice, with a lower proportion of female drivers, Marie-Axelle Granié also observed differences in driving behaviour. Based on a meta-analysis of 150 studies, she highlighted that men have a lower perception of risk and engage in more risky behaviours than women. Men also have a much stronger sense of being good drivers and being safe than women, which helps explain why they take more risks at the wheel and engage in more thrill-seeking practices. As a result, accidents related to risky behaviour are more numerous among men than

among women. In Europe, 76% of people killed in road accidents in 2019 were men. Women, on the other hand, have a greater tendency to comply with the Highway Code, partly because they internalise the rules more; they commit fewer driving offenses and have fewer traffic accidents linked to risky behaviour (Granié, 2020; 2022). Yves Raibaud's study conducted in 2017 in Bordeaux also showed that female cyclists are more cautious, ride less aggressively and do not show off (Raibaud, 2018).

Marie-Axelle Granié (2020; 2022) explains these differences by the impact of gender stereotypes on the way boys and girls are brought up, thus recontextualising these differences in line with gender studies. Girls are valued for being polite and caring, while little boys are encouraged to be adventurous and independent. Perceived as being fragile, girls are taught to be risk-averse and cautious, while for boys, risk-taking is seen as innate and normal behaviour that is part of a masculine identity. Nicolas Oppenchaim's work on teenagers living in housing estates confirms this analysis: he shows that teenage girls living in sensitive urban areas (known as ZUS, Zone Urbaine Sensible) leave their homes less often than teenage boys, take part in fewer extracurricular activities outside their home and are more often accompanied by their parents (Oppenchaim, 2017). It therefore appears that parental practices contribute to gender differences in risk taking and accidents (Granié, 2020).

We can clearly see from the existing data that there are differences in the mobility practices of men and women. However, as Anne Jarrigeon (2019a) points out, the research very rarely takes this data into account, thereby overlooking the specificities of women's mobility. Moreover, the quality of this data is insufficient, since it was not produced specifically to study women's mobility. To improve this information, we must therefore produce specific data that reflects the complexity of women's mobility practices and how they differ from those of men. This also raises the issue of research bias: feminist researchers have shown that statistics are always produced from a male point of view (Jarrigeon, 2019a). Finally, the data needs to consider situations where women are not mobile or do not declare their mobilities, whether due to feeling unsafe, scheduling conflicts for certain trips, or opting against professional mobility. Anne Jarrigeon endeavours to document these elements that have consequences on women's access to employment or on their careers (Jarrigeon, 2019a).

Conclusion

Many studies highlight the differences in the mobility practices of men and women. These differences are characterised firstly by more restricted mobility practices for women than for men, reflecting a greater focus on the home. They are then manifested in different modal choices, which also suggests women's greater role in family and household chores: using the car to pick up the children and do the shopping, equipment such as a luggage rack to carry items or a child seat, etc. But these modal choices also reflect differences in the socialisation of mobility, as confirmed by the study of driving behaviours: women are more cautious, take fewer risks and are less present in public spaces. These differences in mobility practices are therefore a reflection of social norms that associate women with the private sphere, portray them as more vulnerable than men and put them in charge of family and household tasks. This last point will be the focus of the next section.

4. Time use at the heart of differences in mobility practices

4.1. A traditionally greater role in household and family chores

One of the main explanations for the differences in mobility practices between men and women is their different schedules, which is in large part due to women still mostly being in charge of household chores and escorting children. Feminist geographers have placed great emphasis on a particular behaviour that is very common to women's mobility: trip chaining, which means performing several tasks during the same journey (returning from work, shopping, picking up the children). This chaining tends to be overlooked in mobility surveys as they attribute seemingly unrelated purposes to different trips (Gilow, 2019). This uneven distribution of chores weighed more heavily on women as they repositioned themselves on the labour market in the second half of the 20th century and saw their employment rate grow from the 1960s (Maruani, 2011). Their trips have increased in number, duration and distance, in particular thanks to gaining access to a motor vehicle (Coutras, 1997).

Cresswell and Uteng cite several studies in the 1980s and 1990s showing that in the Western world, when commuting, men tended to make longer and more direct trips than women, whose commutes were shorter and more complex. Indeed, they often included picking up children, running errands, medical appointments or other tasks traditionally considered to be feminine (Law, 1999; Hanson and Pratt, 1995, cited in Cresswell and Uteng, 2008), thus placing more burdens on women and affecting their movements (Erickson, 1977; Andrews, 1978; Hanson and Hanson, 1981; Howe and O'Connor, 1982; Fagnani, 1983; Fox, 1983; Pas, 1984, cited in Cresswell and Uteng, 2008). While women's mobility practices differ according to their age, place of residence or professional situation, the variables related to household structure and family chores constitute a major factor of disparity between men and women (Coutras, 1997).

At the end of the 1990s, in Île-de-France, men performed 35 to 36% of trips devoted to shopping and escorting family members. Time-budget surveys indicate that since the mid-1980s, their involvement in household chores has increased by a few minutes (Coutras, 1997). However, based on the Global Transport Surveys in Île-de-France in 1992, Frédérique Prédali shows that in the early 1990s, women still devoted on average four times as much time as men to household chores within the home, and twice as much time to childcare and escorting family members. Working women therefore have much greater time constraints than men, since on top of work, they also have to deal with more household and family tasks. As a result, women tend to be constantly pressed for time.

These elements vary according to the number and age of the children, and according to whether or not they have a partner present and their professional activity (Prédali, 2005). To analyse these differences, Frédérique Prédali relied on a statistical analysis and on interviews conducted in 1998 with 20 women aged 25 to 49 living in Île-de-France in various domestic situations: stay-at-home, unemployed, working part-time or full-time, living with or without a partner, with children aged from a few months to 18 years old or even without children, some owning a car and others not. 64% of them lived with a partner and had a job; a quarter were stay-at-home mothers with a working

partner; 10% were single mothers with a job. Prédali observed that when a household buys a second car, women begin to use it as their main mode of transport, as it becomes a tool for managing their time and movements. The car allows them to engage in more activities, to increase their travel distances, and to chain trips related to professional, household and family tasks. Jacqueline Coutras observed the same results in her survey conducted at the end of the 1990s: women who have a personal vehicle do not use it to reduce their daily travel time, but to rearrange their mobility, by driving instead of taking public transport or walking, especially to go shopping and escort children (Coutras, 1997).

As such, when working mothers have access to a car, their mobility is still focused on the same trips (i.e. escorting children, shopping). Therefore, according to Frédérique Prédali, having a car for mothers reinforces their traditional role. She also observes that working mothers feel guilty for having less time for their children and that driving them around in a car can be a way of compensating for their repeated absences.

According to Prédali's survey, mothers who commute by public transport find it especially hard to perform other household or family-related trips that take over one hour. Finally, among the respondents, single mothers face one other major hurdle. Most of them struggle financially due to the lack of a second salary to take care of the household; therefore, they are less able to access housing located more centrally (which is better served by public transport) and motor vehicles. As a result, they spend a lot of time in transport, to the detriment of their leisure activities and those of their children. It also makes it harder to escort others or do the shopping.

Frédérique Prédali also observes that as households have more children, fathers spend more time in the workplace while mothers spend less. Mothers organise their movements and activities so as to spend as little time as possible outside the home and as much time as possible indoors, to take care of household chores. The times of their first and last trips illustrate this point: working women leave later and return earlier than working men (Prédali, 2005). In addition, women's travel range is shorter and their activities concentrated around two poles: home and work, which again, for women, are closer to each other than for men (9 km compared to 13km, according to the 1993-1994 National transport and travel survey). Therefore, as the number of children increases, men and women conform even more to their traditional roles: the father becomes the provider and breadwinner, investing more in the professional sphere, while the mother focuses on childcare[14], withdrawing into the home.

4.2. Ongoing differences

4.2.1. Women still responsible for managing the household and escorting family members

These differences observed at the end of the 1990s persist: several studies carried out since the 2010s bring to light similar results. In France, according to a study by the High Council for Gender

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[14] As analysed by François de Singly.

Equality in 2014, women still escort children and elderly family members 75% of the time. Similarly, women devote 66% of their time to household tasks, compared to 34% for men. 54% of women give up sports after having a baby, compared to 24% of men (City of Paris, 2016). Based on interviews with 57 inhabitants of Bordeaux in 2012, Guy Di Méo showed that women still perform far more household chores than men: all of the 57 respondents, bar only 2 or 3, were almost solely responsible for maintaining the household, preparing meals, and going out to make purchases related to clothing, education and childcare. Men occasionally accompany children to school but do so much less frequently than women. Consequently, women show a much stronger commitment to the household and private sphere, which often extends beyond the living space to include other family spaces in particular. This often comes with significant professional instability for women, which is why Di Méo claims that women end up being assigned to the private sphere. Because their personal economic situation is then so fragile, they are particularly vulnerable to falling into poverty following a break-up.

In England, Benjamin Motte-Baumvoll et al. also observe considerable differences among couples when it comes to escorting children. Women accompany them twice as much as their male partners. Indeed, they perform two thirds of all such trips. In a given day, 35% of women accompany their children in the morning and in the afternoon. Yet they do not work less or closer to home than their male partners. This reveals the importance of cultural factors in explaining these differences. Researchers also shed light on asymmetrical interactions between spouses. Indeed, the researchers show that women's participation in the task of escorting children depends on how their spouse's workday is organized, while men's participation depends only on the constraints of their own workday schedule. While one could assume that one spouse escorts the children in the morning while other takes care of doing it in the evening, the researchers show that the parent who escorts them in the morning will most likely do so again in the evening. As such, the dominant model for working couples seems to be that women are in charge of accompanying the children (Motte-Baumvwoll, 2021).

4.2.2. The consequences on their mobility

Marie Gilow (2019) proposes the concept of "Domestic Mobility Work" to understand household-related trips. Based on 45 interviews with mothers living in Brussels, she describes domestic mobility work as relying on "considerable logistical efforts, as it requires spatially and temporally reconciling uncoordinated spheres of activity, [and] a specific transportation work, implying a particular physical condition in the public space and demanding supervision and care when children are being escorted." The women interviewed often report feeling responsible for taking on this household chore, without being able to explain why. Marie Gilow thus shows how much this role is deeply engrained in certain women and analyses domestic mobility work as "the spatial dimension of a role which was built within the family framework and which assigns them a predominant role, as much for education and childcare as for feeding the family." However, some women who can afford it delegate this domestic mobility work to other women they employ (nannies, cleaners, etc.), highlighting the intersection of gender and class issues.

Taking care of the household has implications in terms of modal choice and equipment. For instance, research confirms a preference for cars. In Marie Gilow's study, several women use the household's second car, which is reserved for their use. This car is generally smaller and less powerful than the main car, and primarily used for everyday trips. This confirms the functional dimension of the woman's car, whereas the main car used by the man serves as a social indicator. However, many women do not have access to a car, especially in low-income households with only one vehicle, which is mainly used by the man. This is especially challenging for women living in sparsely populated areas with poor public transport. Walking becomes more important but relatively ineffective in rural areas, with long distances needing to be covered to access services, jobs, etc. Moreover, women's mobility is further hindered by the lack of childcare services in these sparsely populated rural areas, leading an estimated 8 out of 10 women to stop working (Centre Hubertine Auclert). As for the women who do use such childcare services, their facilities can be located much further away than in urban areas, generating stress in the event of traffic congestion or train delays.

If cars are often favoured by women in charge of taking care of the household and the children, a survey by Yves Raibaud carried out in 2017 in Bordeaux suggests that cycling is increasingly chosen for daily activities, especially for the purpose of accompanying others. The survey shows that some women enjoy cycling because it saves time and allows for stable travel times, which, according to one respondent, is especially valuable "when you're working and being a mom at the same time." Bikes can therefore be chosen as an alternative to cars to accompany children, as they save time by avoiding the need to find a parking space. Finally, the respondents appreciate the practicality of cycling for performing small errands easily and quickly (Raibaud, 2018). These preferences are reflected in how equipment has evolved: for instance, more women owned a baby carrier in 2017 than in 2013 (9.6% compared to 5.9%). Similarly, women remain better equipped than men for escorting others: in fact, women cyclists are three times more likely to own a baby carrier (figures from 2017). In addition, 27% of women carry belongings or shopping bags when cycling, compared to only 10% of men.

The fact that women have to put in all this extra mobility-related work is a mental burden, as shown by Anne Jarrigeon in her 2018 documentary "All else being equal" (*Toute chose égale par ailleurs)*, which follows several women for a day, from morning to night. Women bear all the responsibility for day-to-day life. The film shows how they equip themselves to be mobile, what items they carry (such as bags) and how they carry more items than men. In a way, they travel with an "enlarged body" (Gilow, 2019) that includes their own physical body but also extends to the children they are escorting and the equipment they are carrying. Moreover, the documentary shows that escorting a child to school is not just a simple, straightforward journey back and forth: "A child is a being who resists, who doesn't want to get dressed, who knocks things over, who ties his shoelaces wrong, who makes mistakes, who smears his sister with toothpaste on the way out; there are all these micro-gestures of everyday life which consist in negotiating accelerations in the moment in order to be ready and leave on time. In short, this whole mobility is ultimately being adjusted even before actually occurring." (Jarrigeon, 2019b). The camera can capture the multiple ways in which women have to pay attention to their environment and show all the gestures that reveal the mental burden they carry. While this mental burden is invisible in the statistics, Anne Jarrigeon's documentary shows how it manifests itself in reality (Jarrigeon, 2018; 2019b).

Finally, we can note that women's role in household management and childcare also impacts their professional mobility. Indeed, research by Ravalet et al. (2014) on long-distance home-work mobility shows that long-distance domestic commuters are mostly men or women without children. Women's professional mobility decreases after having a first child and stops completely after the second child (Ravalet et al., 2014), confirming here again that men are more involved in the external and work-related sphere, while women are more involved in the private sphere, caring for the children.

Conclusion

The differences in the mobility practices of men and women are therefore intricately linked to the fact that women are still responsible for most household and family-related tasks, even though they are working more and more. As a result, women tend to have much busier schedules than men, causing stress and fatigue. Additionally, the fact that they are responsible for performing these tasks impacts how they organise their mobility: trip chaining, modal choice, etc. Mobility differences between women and men can also be explained by the fact that women often feel unsafe going out, which is directly linked to their place in public space and the gender norms that govern it. This issue is the subject of the next section.

5. Feelings of insecurity among women: an obstacle to their mobility?

5.1. Are women's fears inconsistent with reality?

Anglo-Saxon feminists were the first to show that women's personal fears limited their use of public space in cities (Hanmer, 1987; Stanko, 1992, cited in Gilow, 2015). Numerous studies corroborate that women feel more unsafe in public spaces than men (Condon, Lieber and Maillochon, 2005; Gilow, 2015; Gilow and Lannoy, 2017; Lieber, 2008). This fear is also present in public transport. The survey on "Feeling unsafe in public transport in Île-de-France in 2017," carried out by L'Institut Paris Région, confirms that there is a significant difference between men and women (figure 1) in terms of feeling unsafe, which is a discrepancy that has been identified for years (figure 2).
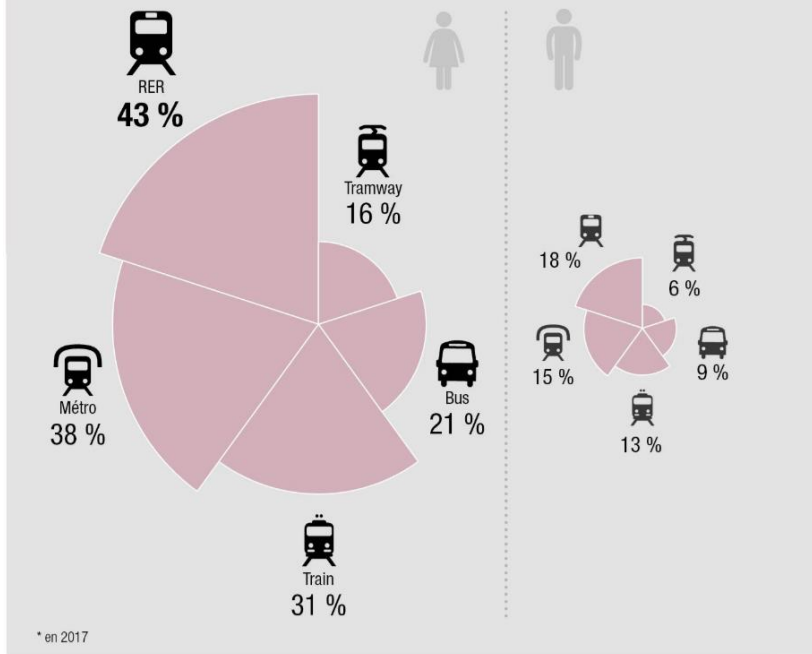
Figure 1 – Women's feelings of being unsafe in public transport in 2017 – Source: L'Institut Paris Région, 2018
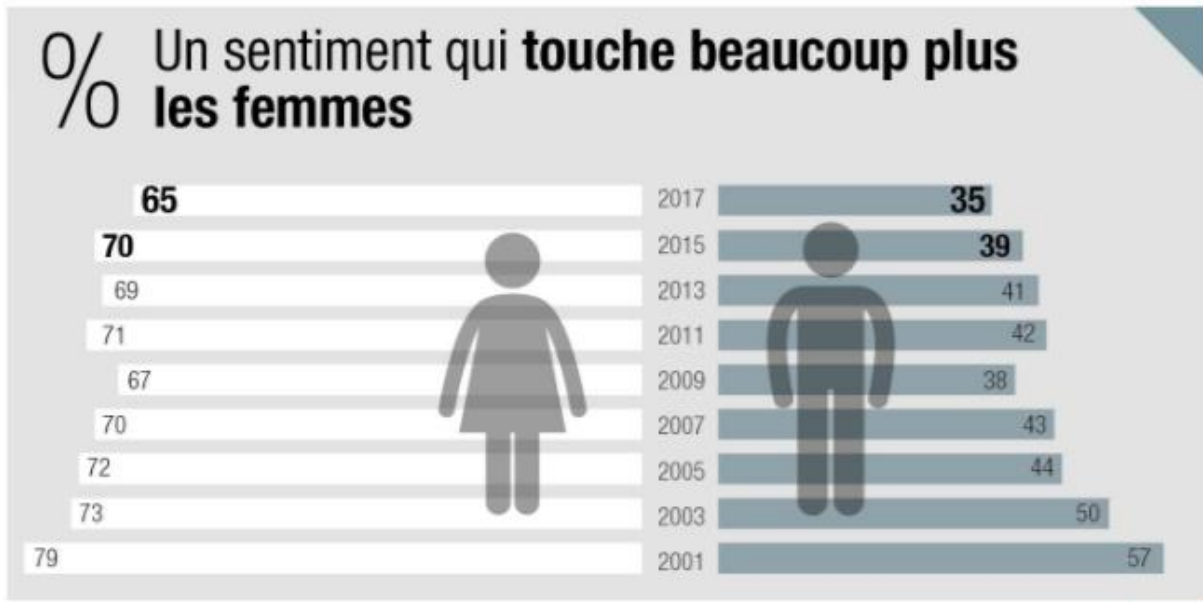

Figure 2 – The feeling of being unsafe according to gender between 2001 and 2017 – Source: L'Institut Paris Région, 2018

We find that women are indeed over twice as likely as men to be afraid on public transport. While the women surveyed primarily mention the RER and the metro, almost a third of them also feel afraid on the train.

The 2019 survey by L'Institut Paris Région on public transport safety in the Île-de-France region questioned over 50,000 regular users (holders of an annual Pass Navigo or Imagine R card) and found that women are mainly afraid of sexual assault and that these fears are exclusively female (Figure 3). Numerous studies confirm that women particularly fear being raped (Griffin, 1977; Hanmer, 1977, quoted in Condon et al., 2005), despite the fact that rape is an offence that is mainly committed by close acquaintances of the victim – partners or ex-partners, friends or family members – and in familiar locations such as a household or a regular meeting place[15]. According to the women interviewed in the survey by L'Institut Paris Région, sex is the first criterion of vulnerability: 80% of women worry about being robbed or assaulted because of their gender, compared to only 5% of men.

Women also report being more afraid of public transport stations, platforms and corridors than men. In fact, 65% of the women surveyed consider the transport vehicle itself to be the most unsafe place, compared to 71% of men; while the remaining 35% of women consider other places (platform, station, corridors) to be the most unsafe, compared to 29% of men. The main fear factors in transport for women are people under the influence of alcohol or drugs (40% of women), rude individuals (about one quarter of women) and deserted places (feared by 30% of women). Men share these fears to a certain extent: in fact, they are just as likely to be worried about individuals under the influence of alcohol or drugs (40%) and even more likely to fear rude individuals (over 30%), but they are half as likely to be worried about deserted places (15%).

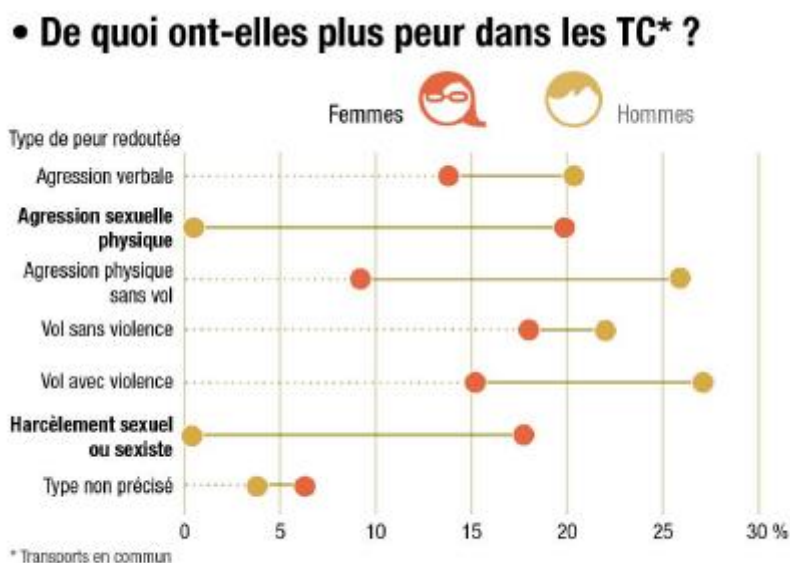*Figure 3 – Fears of women in public transport in 2019 – Source: L'Institut Paris Région, 2021*

The National survey on violence against women in France (ENVEFF, *Enquête nationale sur les violences envers les femmes en France*), carried out in 2000, already showed that women were more afraid of going out at night, even if certain places were perceived as dangerous at all times. While

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[15] Parisdugenre.fr

some women - the more disadvantaged, less educated, and older - were more likely to feel afraid when going out during the day, others - the younger, more educated, students, urbanites, and single women - feared going out at night more (Condon, Lieber and Maillochon, 2005). More recently, the 2019 survey by L'Institut Paris Région revealed that the most feared time of day for women in public transport is the early evening (Institut Paris Région, 2020) (figure 4).
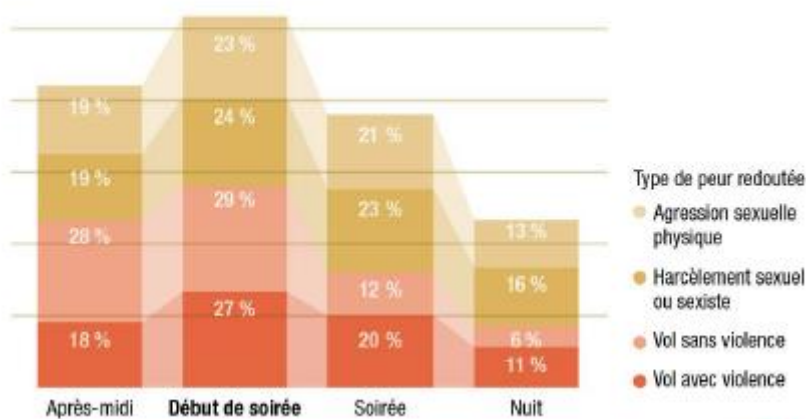

Figure 4 – Type of fears reported by women, by time of day in 2019 - Source: L'Institut Paris Région, 2020

However, according to Condon, Lieber and Maillochon (2005), women's fears about safety have often been taken for granted, because women are assumed to be innately vulnerable to begin with. Consequently, this feeling of being unsafe has rarely been studied in France, whereas feminist researchers in the English-speaking world have paid more attention to it and in particular to how it impacts women's mobility. Another reason women's fears are not always taken seriously lies in an apparent paradox: while women feel most exposed to assault in public spaces, they are in fact less likely than men, statistically (based on reported attacks), to be victims of assault, as pointed out in particular by Elizabeth Stanko in 1992. Indeed, she noted that while women worry about crime on average three times more often than men, young men are actually the most common victims of violence in the public space. In fact, the rate of women victims of attack in public spaces is relatively low (Skogan, 1977; Garofalo and Laub, 1979, cited in Condon, Lieber and Maillochon, 2005). However, Condon, Lieber and Maillochon consider these estimates to be distorted by various factors. They hypothesise that women are less present in the statistics pertaining to assault precisely because they have adapted their behaviours due to their feelings of being unsafe, and so they go out less and expose themselves to less risk. They also note that administrative statistics do not include undeclared violence, or sexual or psychological aggressions such as harassment.

5.2. The causes of women's fears

5.2.1. Public spaces designed for and by men

Public spaces today still bear the marks of centuries of male domination. First of all, streets and monuments encountered in the public space are overwhelmingly named after famous men. Furthermore, advertising, movie posters and newsstands convey the image of women as sexual objects and display their supposed hyper-availability (Jarrigeon, 2019c; Froidevaux-Metterie, 2021). Women's bodies are depicted with welcoming arms or seductive eyes, their mouths always open – all of which is in total contradiction to the actual demeanour of women walking in the streets, who do not advertise such availability (Jarrigeon, 2019c). Finally, sexual harassment contributes to making public spaces hostile to women.

Consequently, according to Johanna Savé and Claude Enjeu (1975), "no space in the city belongs specifically to women. Neither the monuments, nor the highly functional high places, nor the spaces where they work to earn a living or to perform household chores. Local spaces in the neighbourhood are theirs in appearance only because they cannot invest in any significant activity there. They are never more than elements of a whole that is dominated by men. The urban fabric takes on a feature of all other institutions: sexism is also part of it."[16] This observation, that dates back to the 1970s, was recently confirmed in 2021 by urban anthropologist and feminist activist Chris Blache. According to her, despite the city being neutral in appearance, it is not egalitarian. Gym facilities, pétanque courts and sports fields are "spaces that glorify virility."[17] They are used mostly by men, as are public benches, some Vélib stations and even some bus stops. According to Chris Blache, men's presence in these places is considered legitimate, whereas women are easily criticised if they stand around in the public space[18].

The creators of the website *Les Paris du Genre* point out that women are much less involved than men in the production of public spaces. Since there are more men on the engineering teams that design public spaces, women have fewer opportunities to make decisions about urban planning and their experience of urban spaces is therefore taken into account less than that of men[19]. In Algeria, Zitoun et al. (2020) show that the production of scientific knowledge on urban environments was until very recently the exclusive purview of men. Women are also less likely to get involved in planning projects; a 2006 report on how gender issues were considered in the revision of the SDRIF (Master Plan for the Île-de-France Region) found that 80% of the people who took part in the public consultations were men[20]. This creates a vicious circle: women do not always feel welcome in the public space and are therefore less involved in its production, thus reinforcing their exclusion from the entire process in favour of men.

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[16] Quoted on Parisdugenre.fr
[17] Dumeurger M., April 2021, "Chris Blache : face aux villes trop viriles" [Chris Blache: facing cities that are too virile], in the report "Agir pour le vivant" [Acting for the living], *Liberation*.
[18] Dumeurger M., April 2021, "Chris Blache : face aux villes trop viriles" [Chris Blache: facing cities that are too virile], in the report "Agir pour le vivant" [Acting for the living], *Liberation*.
[19] Parisdugenre.fr
[20] Parisdugenre.fr

Consequently, public spaces are dominated by men in their very conception. But the materialisation of this male domination does not stop at the toponymy or actors involved in urban planning. This domination can also be seen in all the behaviours, gestures, words (assault, sexual harassment) which make women feel unwelcome in the public space. This is the subject of the next point.

5.2.2. Female victims of various aggressions and sexual harassment

Women can be the target of many different kinds of aggressive acts. In 2000, the National Survey on Violence Against Women (ENVEFF, *Enquête Nationale sur les Violences envers les Femmes*) looked at violence against women based on a sample of 6,970 women aged 20 to 59. This survey was supplemented in the mid-2010s by the VIRAGE survey (Violence and Gender Relations) carried out by the National Institute for Demographic Studies (INED). The ENVEFF survey showed that 13% of women had been victims, in the public space, of verbal insults or threats directed at them, in 75% of cases, by men. 2% of the surveyed women were victims of physical attacks, 5% had been stalked, and 3% had encountered an exhibitionist. In the 2015 VIRAGE survey, approximately 7.6% of women reported at least one form of sexual violence (most often groping) in the public space over the past 12 months (Bereni et al., 2020). Aggressions that can be grounds for a formal complaint (theft with violence, physical brutality, armed assault) are rarer but still affect 1.7% of women in a given year. Additionally, the 2015 report by the High Council for Equality Between Women and Men (HCEFH) cites a survey in which 100% of the women claimed to have been sexually harassed on public transport at least once during their lifetime. In over 50% of the cases, the first aggression occurred before the age of 18. Three-quarters of the women said they had been followed in the street in a menacing way and half said they have been brushed against or groped (HCEFH, 2015, cited in Raibaud, 2018).

Locally, an online study conducted in 2016 by Kéolis and the City of Bordeaux found that out of the 4,793 female respondents, a quarter had been subject to insistent stares, an intrusive presence, whistling or catcalling over the past 12 months in Bordeaux; nearly 20% reported unwanted comments about their appearance or unwanted physical contact or groping (Raibaud, 2018). The experience of Muslim women wearing a veil has also been documented in an interview survey of around twenty women aged 18 to 60, presented on the *Paris du genre* website[21]. Many women report assaults in public spaces in connection to wearing the veil: hostile looks and words, but also physical assaults such as being sprayed with water or spit on, having their veils torn off and being hit. These testimonies illustrate the intertwining of power relations connected to gender but also to other factors such as skin colour, religion, social class, etc.

The ENVEFF survey also shows that assaults do not necessarily occur in deserted or enclosed spaces, take place at night, or even target isolated women. Indeed, three-quarters of assaults occur in a place that the victim frequents often; 67% take place during the day or early in the morning and nearly 65% happen in locations frequently visited by other people. In other words, most assaults take place during the day and in familiar and usually busy places. The 2017 survey by L'Institut Paris

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[21] Parisdugenre.fr

Région also shows that over a third of female assaults occur on public transport and that 32% occur in public places (see Figure 5).
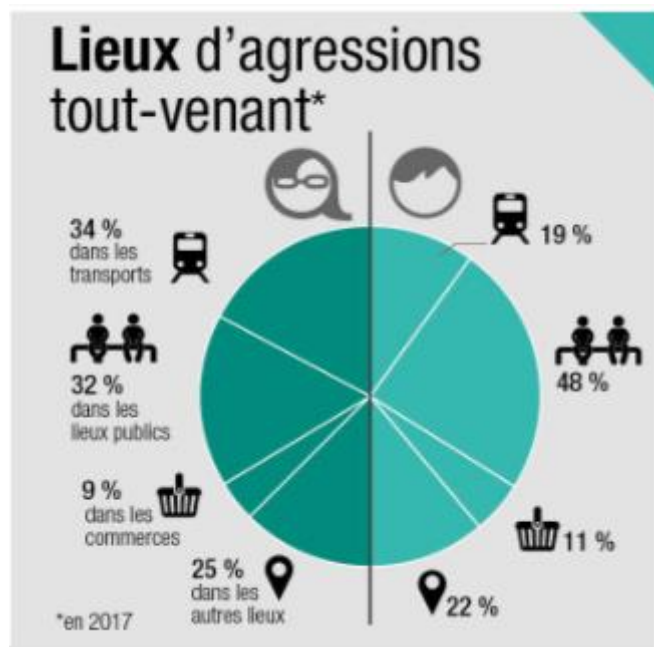
Figure 5 - Locations of aggressions according to gender in 2017 – Source: L'Institut Paris Région, 2018

These real experiences of aggression and sexual harassment compound women's feelings of being unsafe in the public space; and women who have already been assaulted in the past are even more fearful (Condon, Lieber and Maillochon, 2005). This feeling of being unsafe can also be fed and rekindled by the media when it reports on assaults of varying degrees. For example, on New Year's Eve 2015, thousands of women were victims of mass sexual assaults in Cologne and in other cities in Germany and Europe. According to Marie Gilow (2017), these attacks feed the imaginary of an anonymous, urban and nocturnal violence that preys on women, making the city at night a particularly dangerous place for women.

Box 1: The case of sexual harassment

The case of sexual harassment

Sexual harassment was identified by American feminists in the 1970s as a central feature of gendered power relations. The #metoo movement gave it considerable attention in the late 2010s. There are two main forms of harassment: the first involves soliciting sexual favours under threat of a sanction, for instance in the case of sexual harassment by a superior in the workplace; the second consists of an environment that conveys elements of a sexual nature (such as images, jokes, etc.) that are harmful to women. Anne Jarrigeon has documented this second type of harassment by pointing out paradoxes in how some anti-harassment measures are implemented.

For example, in the Paris metro, anti-harassment posters are displayed on scrolling billboards which, when rotating, next display sexist advertisements.

In France, sexual harassment was defined as a criminal offense in 1992 and reduced in the Labour Code to pressure exerted by a person in a position of authority to obtain sexual favours. Since 2002, all behaviours aimed at degrading working conditions are, by law, considered to be moral harassment. This paves the way for the recognition of sexual harassment exercised through a hostile environment (Bereni et al., 2020).

Sexual harassment in the public space and in transport has been the subject of numerous studies. In 2012, student Sophie Peeter, referenced by Marie Gilow (2015), walked through Brussels with a hidden camera to film the verbal and physical street harassment aimed at women on a daily basis, thus shedding more light on this issue. More recently, Sian Lewis studied sexual harassment on the London Underground, showing how harassment is aligned with public transport flows that are dictated by the city's rhythms: rush hours, lulls, alternation between day and night. These are all conditions that facilitate harassment and help conceal it. What makes harassment in transport specific is that it occurs in a moving space, in a place of transition. This shapes how female victims of harassment perceive it: as a temporary experience, in a closed public space where people come and go, where the crowd is constantly recomposed and where the aggressor can easily appear and disappear. Women tend to not want to make a scene or draw the attention of others by calling out the incident, especially since reacting would disrupt their own rhythms and could prove pointless due to the interpenetration of transport rhythms and harassment (Lewis, 2018).

Sexual harassment can be interpreted as a warning by men to women: through verbal or gestural aggressions, harassers imply that their aggressive behaviour could go further, signalling to women that their presence is not accepted or respected in certain public places (Gardner, 1995 Stanko, 1992, cited in Gilow, 2015). Ultimately, everything combines together to remind women that in some way, walking alone in certain public spaces or after a certain hour is a transgression of gender norms (Gardner, 1995, quoted in Gilow, 2015). These warnings are not necessarily considered to be violent acts: they can take the form of an insignificant remark, such as a compliment, which nonetheless reminds women that they are at risk (Condon, Lieber and Maillochon, 2005). These interactions, which could be considered harmless, are experienced by most women as invasions of privacy (Lieber, 2011). Some are afraid because they do not know where it could lead; and the feeling of being unsafe partly lies in the anticipation of an aggression. Simple remarks, which are part of everyday sexism, just like openly derogatory or violent attacks, contribute to reinforcing women's sense of fear and giving them the impression that they are not really welcome in the public space, which is how many women say they feel (Condon, Lieber and Maillochon, 2005). This sense of not being legitimate is analysed by Noémie Renard, who criticises the existence of a "rape culture" that relies on blaming the victim, for instance by making her feel that she should not be in this or that place. In this sense, rape culture contributes to controlling women's movements in public spaces (Renard, 2018). Sexual harassment can also be analysed as being part of the patriarchal system which, according to Camille Froidevaux-Metterie (2021), forces women to be sexually available.

Harassment is therefore symptomatic of a gendered power imbalance in favour of men that is exercised in the public space. Bereni et al. analyse it as follows: "In this context, sexual harassment is an act of insult; it is an act that means "bitch" and that puts women back in their place in the symbolic economy of sexism. The "bitch" insult, for which there is no [masculine equivalent], draws upon a patriarchal conception of a gender-based sullying, a conception extorted by the insult - which puts the recipient in her place while performatively re-establishing the patriarchal framework." (Bereni et al., 2020) Harassment thus contributes to maintaining this gender power

relation to the benefit of men. Marie Gilow (2015) concurs: for her, the problem of harassment is not just a matter of safety. It contributes to performing the gender identities of both men and women, in a society that is still strongly structured by a male/female dichotomy.

5.2.3. A vulnerability that is internalised by the "socio-gendered construction of identities" (Lieber, 2011)

Marylène Lieber (2011) remarks that researchers and politicians often view women's fear in public spaces as obvious because of their greater vulnerability, a weakness seen as natural and therefore not requiring any special treatment.

Women's sense of danger and their inability to defend themselves in case of attack is analysed as the internalisation, by women, of a condition of submission. For Pierre Bourdieu, masculine domination, and the way in which it is imposed and endured, is the fruit of a "symbolic violence" that comes from how gender is communicated and produces a "paradoxical submission" (Bourdieu, 1998, quoted in Gilow, 2015). Unlike physical violence, symbolic violence is based on the acceptance by the dominated person of her condition of submission, enabling this relationship of domination between men and women to be perpetuated (Bourdieu, 1990, quoted in Gilow, 2015). Raibaud (2013) speaks of a "process of dehistoricisation and naturalisation of gendered roles" which leads to women being perceived by others and by themselves as inherently vulnerable (Gilow, 2015).

This sense of vulnerability is maintained by the normative system in which women and men evolve and that teaches women that they are fragile and exposed to danger. In *King Kong Theory,* Virginie Despentes shows how parents' concern for their daughters, their protective attitudes and warnings, teach women to internalise the threat of aggression and to control both their mobility in the public space and their sexuality (Despentes, 2006). In a 2008 study quoted by Anne Jarrigeon (2019b), Marylène Lieber points out how the guidelines given to women at the time by the Ministry of the Interior – to not go out alone at night, to be accompanied by someone, to dress in a certain way – shifted the blame onto women for assaults (Lieber, 2008).

According to Coline Cardi and Geneviève Pruvost, "teaching women to be scared of an aggression [...] both serves to limit their movements and ensures that they won't respond to violence with violence" (Cardi and Pruvost, 2007). Indeed, not only are women taught to be afraid everywhere - even at home since they may have been followed – they are also taught to not defend themselves (Despentes, 2019). Women internalise the idea that they are vulnerable and that they must constantly fear aggression. They feel particularly vulnerable to sexual violence, with rape being the most feared; Ferraro (1996, cited in Condon, Lieber and Maillochon, 2005) speaks of a "shadow" effect to describe the impact of this fear of sexual assault on all aspects of a woman's life. This is true even though rapes and murders committed by strangers in the public space are exceptionally rare. Moreover, women feel guilty for being afraid. In interviews, for instance, they say they imagine worst-case scenarios in their head when they are anxious in certain places and judge their fears to be

irrational (Gilow and Lannoy, 2017). In other words, they experience this fear unwillingly and with a sense of shame.

Thus, as summed up by Marylène Lieber, "the feeling of being unsafe expressed by women [...] is a core part of the socio-gendered construction of identities, which today involves, for all females, the learning of precautions to avoid violence directed at them" (Lieber, 2011). These constructions contribute to limiting women's freedom of movement.

5.2.4. Places and situations that give rise to feelings of being unsafe

Marie Gilow and Pierre Lannoy (2017) analysed the kinds of places and situations which, due to their spatial configurations and sensory impressions (noise or silence, smells, visual impressions), are particularly anxiety-inducing for women. They used a qualitative survey conducted among ten women living in Brussels.

The authors show how the perception of urban spaces depends primarily on sensory impressions, which take on meaning through associations made between these impressions and the practical implications that result from them.

One's relationship to space is primarily *visual*. It is embedded within the context of a city's anonymity, which urban sociologists have linked to the density and mobility of urban life. Urbanites moving about the city are strangers to one another and travel across this space to attend to their respective occupations. In this context, Goffman (1973, quoted in Gilow and Lannoy, 2017) describes urbanites as constantly "deciphering" their environment, in order to assess its potential threats based on their visual perception of a place and their interpretation of it. Marie Gilow and Pierre Lannoy show that for women, this deciphering is primarily focused on identifying a stranger's gender. For one of the respondents, identifying a man ahead means being on her guard and monitoring this person.

This visual perception is influenced in particular by the ambient light. Respondents report feeling unsafe in poorly lit or dark places, described by one respondent as "gloomy" (Gilow and Lannoy, 2017). A reassuring place is one in which the respondent can quickly and clearly identify and appreciate her surroundings thanks to proper lighting. To visualise the space is then to "dominate it visually and therefore cognitively" (Augoyard and Leroux, 1992, cited in Gilow and Lannoy, 2017). However, good visibility is not everything: respondents perceive harsh or cold lighting as unpleasant. In addition, a well-lit place can be a double-edged sword: it makes a woman visible to others, which can be distressing if she herself cannot see the person who sees her, such as when someone is walking behind her.

The sensory relationship to space is also *auditory*. Some respondents claim they listen carefully when in a metro station or corridor to pick up on voices and identify whether they belong to a man or a woman. Hearing a female voice is reassuring, while the sound of footsteps from a single person is distressing, as it suggests to a woman walking alone that she may be confronted by a man. Silent places are also perceived as unsafe because they suggest the absence of any reassuring presence in the event of an incident. Lively places are perceived as more reassuring since they indicate the

presence of other people who may be able to intervene in the event of an incident or a bad encounter. As with lighting, sound is a double-edged sword, as noise can be both reassuring and alarming, depending on its nature and intensity (Gilow and Lannoy, 2017).

Then, places are perceived through the sense of *smell*. This is what Jean-Marc Besse terms "olfactory geography" (Besse, 2010, quoted in Gilow and Lannoy, 2017). Places that emit unpleasant odours, such as the smell of urine, convey an impression of dirtiness associated with danger, creating a "creepy" atmosphere as one respondent put it. Smell is "social information," as indicated by Goffman (1973, quoted in Gilow and Lannoy, 2017). Indeed, Gilow and Lannoy explain that a bad smell suggests the transgression of a norm: throwing away rubbish, urinating, vomiting, etc. Such acts appear to be transgressions that were allowed to happen because of the location's configuration, such as being isolated or visited by few people. Women associate a bad smell with those who cause it, and a dirty place with those who dirty it. If these people are capable of such normative transgressions, women assume them to be capable of other transgressions, such as violence against women.

To summarise this feeling of anxiety fuelled by the sensory perceptions of places, the authors quote Augoyard and Leroux (1992, quoted in Gilow and Lannoy, 2017): "It is from supposedly indexical elements, sometimes only signs, that my anxiety will find a cause, in other words credence, but also a visual, auditory and olfactive configuration infused with meaning for me."

In addition to one's perception of a place, certain social figures can also contribute to the feeling of being unsafe, as reported by the women surveyed by Marie Gilow and Pierre Lannoy. These unsettling presences are almost always men; they can be under the influence of alcohol, aggressive, or showing interest in women by staring, for example. According to the authors, "these figures embody different variations of a clearly gendered fear - that of sexual violence - but also, more generally, of physical aggression seen as a male prerogative. Reassuring figures are those who represent normality and are seen as potential guardians of the respect for social norms" (Gilow and Lannoy, 2017).

By combining the physical configuration of spaces with the potential presence of unsettling individuals, the authors then present some configurations of places perceived by their respondents as particularly stressful.

- Corridors: corridors can be found in metro or train stations, they can be passages that connect underground stations or cross over a bridge. Corridors are characterised by their length and narrowness, as well as their isolation from the outside world. Their length and lack of visible exits contribute to giving women a sense of being trapped, eliciting the fear of not being able to escape. Corridors that are not straight feel particularly unsafe because visibility is reduced. For instance, hearing footsteps ahead without being able to identify who is coming can be quite stressful.
- Labyrinths: these are complex places – large metro stations, places that are undergoing construction work, etc. – that do not offer good visibility but have many nooks and dark corners (hidden behind a pillar or a construction barrier for instance). These dark corners are

a source of anxiety for women: a stranger can hide there or assault a woman out of sight... In addition, the place's complexity can induce the feeling of being lost and make an escape more difficult. While a corridor restricts the possible exits, a labyrinth multiplies them, so much so that a one can feel confused and disoriented, only making an escape even harder.

- Alleys: these are small narrow streets which are different from corridors in that they are open to the outside. Some women report avoiding them, even by stopping at a station that is further away from their destination. This shows the importance of the immediate environment in how attractive and populated a place is.

- Open, empty spaces: these places can be vastly different in nature – residential areas, industrial zones, parks, etc. – but they are big and open, which generates a feeling of isolation and a lack of reassuring presences. A vast space can be disorienting, making women feel helpless and fearful of not finding a place to shelter in the event of an incident.

By analysing the places that make women feel unsafe, the authors identify how gender relations based on the fear of male violence operate through urban atmospheres and forms.

Moreover, on top of these physical dimensions, feminist geographers have added a temporal dimension that contributes to the feeling of being unsafe (Darke, 1996; Valentine, 1992, quoted in Condon, Lieber and Maillochon, 2005). Indeed, nighttime is particularly feared. For Condon, Lieber and Maillochon (2005), the fear of going out at night reflects the idea instilled in women that they should not be alone outside at certain times. According to Stanko (1990, quoted in Condon, Lieber and Maillochon, 2005), women who find themselves in the public space after a certain hour constantly bear in mind that they risk being assaulted.

5.3. The impact of feeling unsafe on mobility

When moving around, whether or not women feel unsafe depends on the place and time of day. This feeling of being unsafe has not always been taken seriously, as we saw above; yet it has a non-negligible impact on women's mobility, as shown in particular by numerous English-speaking authors (Griffin, 1977; Hanmer, 1977, cited by Condon, Lieber and Maillochon, 2005).

Condon, Lieber and Maillochon (2005) show that while women report being afraid of going out alone at night, this does not at first seem to hinder their mobility; on the contrary, the ENVEFF reveals that the women who manifest the greatest anxiety are also those who go out the most. Indeed, younger women, graduates, students, urbanites and single women are those who are the most fearful of going out at night and travelling through certain empty streets or places; however, nearly 70% of them go out regularly. This may reflect a refusal to give into their feelings of being unsafe: as such, these women accept the risk of going out despite their fears, thus claiming their right to mobility. "Going out in this context is no longer a possibility but a battle one wages with oneself, training oneself to resist the permanent potential influence of fear." (Condon, Lieber and Maillochon, 2005)

According to the ENVEFF, the women who go out the least at night are also those who say they are afraid both day and night. Therefore, their constant fear seems to impact their mobility by discouraging them from going out in the evening, which is considered to be least safe time of day. It therefore seems that women's mobility is affected by their fear when it reaches a critical threshold by manifesting itself constantly and when fear attaches more to public spaces themselves than to the

contexts in which they are practiced (Condon, Lieber and Maillochon, 2005). However, many women stay at home in the evening not so much out of fear, but through the habit of not going out late or because of family constraints. Some women who would like to go out may choose not to do so unless they can arrange to have someone with them. A study conducted among women in Edinburgh showed that the fear of being assaulted did not stop them from going out but led a third of them to find someone to go out with them (Pain, 1997, quoted in Condon, Lieber and Maillochon, 2005).

More recently, in 2019, L'Institut Paris Région conducted a study in Paris on "Feeling unsafe in public transport in Île-de-France," showing that 60% of women who live in the city centre often go out in the evening, compared to 66% of men. This confirms that the feeling of being unsafe may impact women's nights out. The survey also shows that 58% of women who are afraid to go out alone in their neighbourhood rarely go out in the evening (Institut Paris Région, 2020). More specifically, several studies have also analysed the impact of feeling unsafe on the use of public transport. In Chicago, for example, a study showed that fear was the main reason women stop using public transport (Yavuz and Welch, 2010, cited in Gilow, 2015). Although fear does not stop women from going out most of the time, Figure 6 shows that a small proportion of women indicated that they were too afraid to take public transport. We can therefore see that women's feelings of being unsafe, maintained by the gendered norms that govern societies, restrict their opportunities to access public space (Lieber, 2008; Kramer and Mischau, 1993; Hanson, 2010, cited in Gilow, 2015; Condon, Lieber and Maillochon, 2005). It is therefore discriminating.
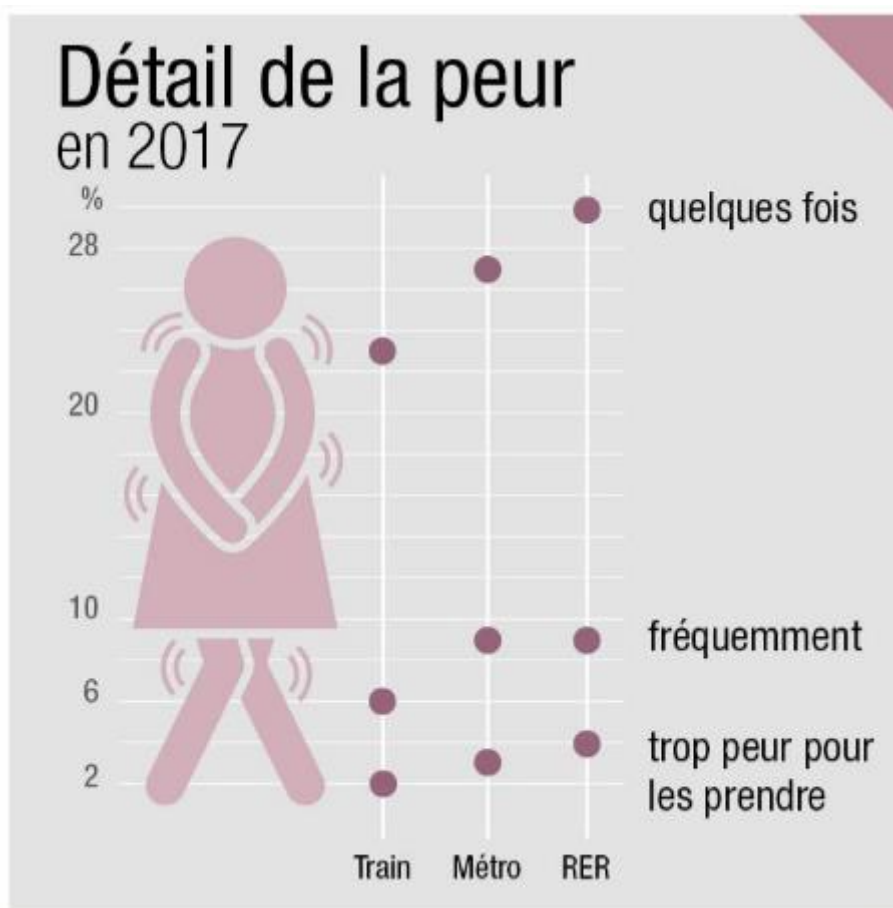
Figure 6 - Frequency of women feeling unsafe on public transport – Source: L'Institut Paris Région, 2018

Guy Di Méo (2012) analysed these restrictions on women's mobility through the concept of "invisible walls" (Di Méo, 2012) restricting women's access to public space: women adapt their itineraries and limit their trips in the city to certain places. According to Di Méo, women thereby face "spatial prohibitions": "They do not go anywhere and everywhere in complete freedom of body and mind." (Di Méo, 2012) Cécile Lequen also illustrated the existence of these invisible walls in a study conducted among 16 people in Quebec (Lequen, 2018): women choose their itineraries and modes of transport according to the danger they perceive. However, women are not the only ones to be restricted by these spatial prohibitions: sexual orientation also appears to be a discriminating factor in accessing public space. Homosexuals, for instance, can have similar experiences to women and come up against the same invisible walls, as Lequen (2018) points out. She argues that these inequalities are the result of the public space being designed from a heterosexual, white and masculine standpoint (Lequen, 2018), thus reflecting predominant social norms (Denèfle, 2004, quoted in Lequen, 2018).

However, Guy Di Méo hypothesises that these invisible walls are not so much the reflection of male domination as they are of spatial prohibitions that women impose on themselves and of which they are the victims. To support his thesis, he relies on a survey of 57 women living in Bordeaux, showing that women have a diversity of spatial behaviours: some have a relatively intense use of the urban space, which for many is a place of numerous resources – meeting places, social relations, festive

locations, etc. By highlighting the diversity of practices in the urban space, Di Méo points out that while some smaller groups of women do have many spatial prohibitions, others manage to make the most of the urban space. He thus concludes that women who restrict their movements out of fear are imposing invisible walls on themselves. He calls for a breaking out of a binary system that imposes an airtight border between women and men in terms of spatial relationships. "In fact, life and status profiles often vary from one person to the next, breaking through all social categories. So let us be careful not to let gender, any more than sex, become an ideological "prison" that obliterates any individual freedom." (Di Méo, 2012).

5.4. The strategies put in place

Many studies have identified the strategies that women implement to overcome their fears, first in the English-speaking world (Gordon and Riger, 1989, cited by Condon, Lieber and Maillochon, 2005) then in the French-speaking world (Condon, Lieber and Maillochon, 2005; Lieber, 2011; Gilow, 2015; Lequen, 2018). There are various kinds of strategies.

First, women can implement avoidance strategies: adapting their itinerary to avoid a particular neighbourhood, street or public transport station, even if it means a longer journey (Gilow, 2015), or even taking a taxi instead of the metro (Bereni et al., 2020). Another avoidance strategy consists in avoiding interactions by looking away, changing sidewalks or adjusting one's trajectory; this strategy is especially employed when crossing paths with a stranger (Lequen, 2018). Women can also adjust the timing of a trip – to catch the last metro or bus for instance and avoid walking home (Gilow, 2015) – or postpone it by sleeping over at the place they were spending the evening (Condon, Lieber and Maillochon, 2005; Gilow, 2015).

Additionally, many women arrange to go out with someone (Condon, Lieber and Maillochon, 2005; Gilow, 2015; L'Institut Paris Région, 2019). For some, this is a necessary condition for an evening out. Because of this, women lose some autonomy and need to make organisational efforts prior to going out. Another way to avoid being alone is to try and stay close to other groups of people and walk at their pace (Gilow, 2015). When riding the bus, some women choose to sit close to the driver (Gilow, 2015).

When they have to travel alone, women deploy strategies to avoid being noticed or approached in public spaces. This may involve adapting the way they dress, which is a strategy often mentioned in surveys. Women report picking neutral clothes so as to appear as unfeminine as possible, "so that they don't see whether I am a woman or a man" (female respondent, Gilow, 2015); "When I go out in the evening, I do the man number: pants, a down jacket, hood" (female respondent, Condon, Lieber and Maillochon, 2005). They avoid outfits that they consider "enticing" – "no make-up, nothing sexy" (female respondent, Condon, Lieber and Maillochon, 2005) – as well as high-heeled shoes because of the noise they make on the floor (Jarrigeon, 2019c). The point of all this is to avoid drawing attention to oneself, but also to be able to escape quickly if needed, thanks to a comfortable outfit. Other women display a brusque or rude attitude to deter men from approaching them (Lequen, 2018). Women also say they make sure to appear busy (L'Institut Paris Région, 2019), for example by carrying a book or headphones (Bereni et al., 2020; Condon, Lieber and Maillochon, 2005), or acting

in a hurry by going as fast as possible (Gilow, 2015). This refers to the notion of "passing by," which is a modality of how women appear in the public space, studied by Gardner (1995, quoted in Gilow, 2015). As such, Marie Gilow (2015) notes that all the elements of a woman's appearance – her clothes, how she walks, her gestures, where she looks, etc. – are means of communicating to those around that she should not be approached.

Another strategy, brought to light by several studies, is for women to walk with a determined and confident look. According to Gilow (2015), this serves to counteract their internalised sense of vulnerability, by demonstrating strength and courage: "have a determined look," "appear to know where I am going even if it is not the case," "show that I am going somewhere and that I should be left alone," "have an angry and hard look" (female respondents, Gilow, 2015). Many say they will not let themselves be intimidated, adopting a resistant mindset and thereby claiming their right to mobility by refusing to be told when to stay in or to restrict their movements for fear of aggression (Condon, Lieber and Maillochon, 2005; Gilow, 2015). In the same vein, some women take self-defence classes, to gain confidence by feeling equipped against an attack (Bereni et al., 2020). Some hold their keys in their hand as a sort of knuckle-duster (Gilow, 2015). All of these strategies can be ways of rejecting their role as vulnerable subjects and of defusing some of the sexist social interactions. However, drawing upon her own experience, Virginie Despentes explains that while some days, women can feel strong and ready to deal with the calls of men, they can also feel sick and tired of constantly maintaining this determined mindset and may not always have the courage to respond to men who want their attention. Indeed, as Virginie Despentes describes it: "In the street I feel like an idiot, I don't have a sure-fire technique" (Despentes, 2019).

More generally, women who go out at night say they are constantly on their guard, always on the lookout (Lieber, 2011; Lequen, 2018). "They are always surveying, calculating, scanning the environment and assessing the potential risk of a situation" (Lieber, 2011). "I am really really attentive [...] and completely on the defensive" (female respondent, Condon, Lieber and Maillochon, 2005). To do this, they can choose to walk in the light or position themselves strategically so as to be able to keep an eye on their surroundings, by standing at the end of a metro carriage for example (Condon, Lieber and Maillochon, 2005; Gilow, 2015). Women accept having to take these precautions, which to them seem like common sense (Lieber, 2011).

Finally, some women choose to take the car, which they see as the most reassuring and secure means of transport, as it provides a bubble that separates them from the public space and allows them to travel safely through a hostile environment (Gilow, 2015). Moreover, studies conducted in the United States reveal a link between the popularity of large 4x4 vehicles and the fear of crime (Lauer, 2005, cited in Gilow, 2015). However, using a car as a solution for these fears raises environmental and social issues, given that not all women have the resources to access a car. Nevertheless, some women report feeling safer riding a bicycle, which is not only more environmentally friendly and less expensive, but which also allows them to go fast and escape troublesome interactions (Gilow, 2015).

Women therefore become "experts in avoidance strategies" (Jarrigeon, 2019c), without necessarily being aware that they are adopting them, which can give them the illusion, at first, that they are free to move as they please (Jarrigeon, 2019c). All of these strategies require significant preparation, both materially – finding someone to go with them, selecting what clothes to wear, checking public

transport schedules, choosing a mode of transport, etc. – and psychologically (Condon, Lieber and Maillochon, 2005). They are "indicative of a long work of preparation and conditioning" (Lieber, 2011) that builds the impression of the home as a safe haven and of the outside world as a dangerous place for women. This perpetuates the traditional association of women with the indoor space and of men with the outdoor space. Women's strategies contribute to their exclusion from public spaces. While these strategies are responses to the gender-based violence that occurs in male-dominated public spaces, they also embody a form of resistance by women to the dominant norms, in their determination to still go out despite the risks involved. Lewis (2018) also shows that despite the strategies women have to implement to deal with their fear and sense of vulnerability, their experience of the city and in particular of public transport is also one of anonymity, of freedom and pleasure. The memory of being the target of harassment in the past leads women to permanently renegotiate and reaffirm their presence and safety in the public space and to reclaim it, in different ways: it can be thinking as little as possible about the incident, reporting it to the authorities, or learning how to raise their voice in the event of an assault in order to reaffirm their place in the public space, etc. (Lewis, 2018).

Conclusion

While women's feelings of being unsafe have not always been taken seriously, they directly affect their mobility in three ways: first, such feelings affect how many trips they make, the range of their trips and the routes they take; second, it affects how they experience these trips; and third, it affects how they unfold, by forcing women to develop various strategies to improve how they feel when going out and avoid stressful situations. It illustrates both the prevalence of the notion that women are specifically vulnerable - a notion that is maintained through education - and the persistence in society of a power imbalance in favour of men, reflected in how they dominate public space. Given this power imbalance, women's strategies reveal how they internalise and - to a certain extent - accept these inequalities, but also how they resist the underlying norms: by going out despite all the risks and being ready to defend themselves in the event of verbal or physical abuse.

How can we fight against women's exclusion from public spaces? How can we lighten their mental burden when going out, especially in the evening? How can we facilitate their movements and thus reduce inequalities between women and men with regard to mobility?

6. The fight against inequalities between women and men in terms of mobility

In the previous sections, we first saw how women's mobility is intricately linked to the chores they have to schedule due to their traditional role of taking care of the household and the children. In

addition to representing a considerable physical and mental burden, household-related mobility can be further complicated by the relevance of the mobility solutions available to women and by the design of public spaces. We then saw how the traditional association of women with the private sphere impacts their movements in the public space, before examining their fears and sense of being unsafe there, and finally the kinds of assaults they can be victims of. This section will now focus on the ways in which women themselves fight against these inequalities, in particular by reclaiming public spaces, and on how these gender-based differences in terms of mobility are viewed by public authorities and professionals.

6.1. Feminist demands for a more egalitarian mobility

Since the 1990s, feminists have used the media and pop culture to promote their ideas, for example through blogs. More recently, the term "cyberfeminism" has appeared to describe efforts by feminists to spread their demands on the internet and via digital devices[22]. They address several themes, including sexual harassment and the inequitable distribution of household chores, which are at the heart of mobility issues.

Demonstrations are also a way for women to reclaim the public space and assert their right to be there. Every year, women in Paris and around the world demonstrate on 8 March for International Women's Day (see box 2). In November 2017 a demonstration took place in Paris at Place de la République in the wake of the #MeToo movement. In their research on Algiers, Zitoun et al. also show that for many women, taking part in the Hirak - a political protest movement that occurred throughout 2019 - was an opportunity to further conquer the public space and pursue their emancipation, despite the continued close presence of "controllers" monitoring their mobility (Zitoun et al., 2019).

Box 2: The feminist collective "Femmes en lutte 93"

The feminist collective of Seine Saint Denis, "*Femmes en lutte 93*"

The 2015 podcast "*Nasawiyat, les nouvelles féministes du monde arabe"* [Nasawiyat, the new feminists of the Arab world] by Charlotte Bienaimé focused on the feminist collective of Seine Saint Denis called "Femmes en lutte 93" ("Women fighting 93", with 93 being the departmental number of the Seine Saint Denis suburb of Paris). Their demands reflect how feminist struggles are intertwined with other issues and their means of action reveal how protests can serve to make women visible and assert their legitimacy in a public space marked by male domination. This collective unites women from different social classes, cultures and generations, who fight primarily against sexism and violence against women, but also against racism, poor housing conditions, the deterioration of public services and the different forms of discrimination endured by people living in their neighbourhoods. Their aim is to take an active part in the evolution of society from their working-class areas.

On 8 March 2015, for International Women's Day, they marched on the streets of Saint-Denis, passing in front of cafes with terraces occupied mostly by men and chanting their demands: "Every day, every night, we suffer from society's system of exploitation. […] We have the right to be in the

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public space, day and night, everywhere, to choose how we dress without being insulted for wearing a miniskirt or being attacked by racists or Islamophobes for wearing a veil."

Women's fight to assert their legitimacy in the public space and their right to mobility can also find a focal point in particular objects, such as bicycles. Many cycling movements also advocate for feminist demands. This is the case, for example, of DIY bike repair workshops, studied by Alexandre Rigal for a project by the Mobile Lives Forum. In France, l'Heureux Cyclage - a network of over 125 associations running DIY bike repair workshops - claims that cycling and learning how to self-repair are tools for female empowerment and emancipation. Some associations organise gendered workshops, with some open exclusively to people who identify as women and/or non-binary and/or transgender. Their purpose is to give women the space to learn the mechanics of their bikes and how to repair them without men watching - given that these skills and practices are usually entrusted to men.

Beyond these repair workshops, cycling movements in different countries also advocate for feminist demands. Matthieu Gillot in particular has studied how cycling movements in South America (Gillot, 2022) and then in North America[23] have linked and merged different kinds of demands: environmental, social, institutional, and also feminist. One of their main demands concerns the equal right to the city for all. Some gatherings are exclusively female, such as the Women's Plurinational Cycling Revolution. For women, it is a matter of asserting their legitimacy in the public space and their right to travel through it, but also of making more specific demands in the public space: the demonstrations mainly take place on days that are symbolic in the fight for women's rights, such as 8 March (International Women's Day) and 25 November (International Day for the Elimination of Violence against Women).

6.2. How public actors and institutions address inequalities in terms of mobility

Here we will examine the different solutions that have been suggested, studied, tested or implemented by researchers, public actors or even professionals, with the aim of improving equality between women and men in terms of mobility.

6.2.1. Alleviating women's mobility burden

In her thesis on Domestic Mobility Work, Marie Gilow (2019) identifies two kinds of solutions to help alleviate women's mobility burden. The first kind would be to support more independent mobility options for children. In this vein, walking school bus systems or even actual school buses can help free up parents from having to take their children to school. However, these methods don't fully address the dangers of public spaces for children. The Italian psychopedagogue Francesco Tonucci, quoted by Marie Gilow, researched this very issue. Observing that the overwhelming presence of cars hindered children's ability to move around the public space freely and safely, in the early 1990s

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[23] Results to be published on the Mobile Lives Forum website.

he imagined a "city of children" which would put the interests and practices of children at the centre of its urban planning. His model has since been taken up by several Italian and Spanish cities. Marie Gilow cites the example of Pontevedra, a Spanish city that took inspiration from Tonucci's ideas and transformed its public space by increasing its recreational potential, enlarging pedestrian zones, limiting traffic speeds and setting up networks of "mobility advisers" for children. This encouraged children to move about independently: in Pontevedra in 2013, 21% of children aged 6 to 12 went to school by themselves. By reintroducing their activities into the public space, the city has operated a sort of deprivatisation of the task of escorting children, thus reducing the need for parental control (Gilow, 2019). In 2022 Montpellier was the first French city to join the International Network of the City of Children imagined by Francesco Tonucci[24].

The second solution mentioned by Marie Gilow consists of developing time policies aimed at improving people's ability to reconcile different social times, for instance by adjusting the opening hours of services or even those of workers. In line with this, local authorities have set up roaming child-care centres to look after young children, especially at unconventional hours. For example, the urban community of Coulommiers Pays de Brie set up the Mille-Pattes organisation, a roaming drop-in day-care centre that travels to a different town every day, providing day-care services in neighbourhoods with low-income families (Centre Hubertine Auclert). This system grants women some spare time to devote to various tasks and to take steps towards finding work or improving their social integration.

However, Marie Gilow warns us about the risks involved if we only provide "symptomatic treatments, without questioning the social structures at the root of the unequal mobility burden" (Gillow, 2019). Beyond looking for solutions to make women's chores less taxing, she calls for "questioning the social origins of the gendered distribution of this work." This brings to light a tension between different approaches aiming to address gender inequalities in mobility: on the one hand, there are those seeking to provide immediate solutions to the problems faced by women, and on the other, those wanting to go deeper and tackle the roots of these inequalities, which implies much longer-term solutions. This tension is at play in the debates about how to make public transport safer (see 6.2.2.5.).

6.2.2. Strengthening women's place and autonomy in society and in the public space

6.2.2.1. Empowering women through mobility

Mobility is not always emancipatory since it can be constrained and experienced as too intense – as shown in research by the Mobile Lives Forum. But it can still be a means of combating inequalities by increasing women's autonomy.

Several studies carried out in particular in southern countries have indeed defended the empowerment of women through mobility. Jennifer Mandel (2004), quoted by Hanson (2010), showed that in Benin, female traders who had the ability to travel had higher incomes than those with more limited travel means. Similarly, a study by Saraswati Raju (2005, cited in Hanson, 2010)

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[24] Goyon Armelle, 2022, Montpellier, first city in France to join the international network "The City of Children" initiated by Italian sociologist Francesco Tonucci, France Info.

assessed a development project in villages in northern India that aimed to empower women by increasing their participation in civic life. She found that one of the key factors of women's empowerment was simply the ability to go out of their homes, to move about in public spaces, and carry out various activities. For the women interviewed, entering the public domain and speaking with strangers for the first time increased their self-confidence and challenged gendered power structures. This newly experienced mobility brought about fundamental changes in their identity, thus beginning to erode traditional gender ideologies and practices (Raju, 2005, cited in Hanson, 2010).

Therefore, helping the women who desire to access mobility and the public space supports their emancipation. But encouraging this free access to public space also requires making it more welcoming.

6.2.2.2.   Reaffirming the place and legitimacy of women in the public space

The creators of the website *Les Paris du Genre* call for a symbolic effort to demasculinise the public space. They mention the redevelopment of Place du Panthéon and Place de la Madeleine in Paris, as part of a major redevelopment project of seven squares in Paris led by the City. This project was an opportunity to reflect on the symbolic representation of women in the public space with the feminist association Genre et Ville (Cities and Gender) and to create efficient spaces for both men and women, with inclusive street furniture. Similarly, in 2015, the inauguration in Aubervilliers of Place des Femmes (the Women's Square) also aimed to reassert women's place in the public space. Proposed by a feminist collective, it intended to call out the male domination of public space and promote gender diversity. At the square's inauguration, the collective organised a stroll through the neighbourhood with puppeteers. According to the women running the website *Les Paris du Genre*, "subverting the usual uses of public space is a way to challenge and spread the message of promoting gender equality in the city."[25]

Street art can also be a way of improving the visibility of women in public spaces. In Paris, in 2015, five street artists including four women, commissioned by the town hall of the 19th arrondissement, created a mural on rue d'Aubervilliers. While the street art scene is very masculine, the project coordinators made a point of calling upon female artists. In addition, the murals are a way of conveying messages. One of the murals, created by feminist artist Tatyana Fazlalizadeh following a workshop with local women, displays a feminist slogan with women's faces, calling out harassment and inequalities between men and women[26]. Street art is a way for women to conquer public space. The Genre et Ville platform organises events at the crossroads of art and urban planning, as well as exploratory walks.

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[25] Parisdugenre.fr
[26] Parisdugenre.fr

6.2.2.3. Relying on their expertise to develop public space

To make public space more welcoming to women, Canadian feminist movements in the 1970s started performing exploratory walks. Their goal was to bring women together to walk through the city and identify elements that could make women feel unsafe or uncomfortable, and then recommend solutions, such adding lights, improving visibility, installing signage or even public toilets, etc. While the public space has been largely built by and dominated by men (see part 5.2.1.), this method allows for women's specific visions to be taken into account, based on their concrete and daily experience of the city. Indeed, this experience is largely dictated both by the traditional roles assigned to women – taking care of the children, doing the shopping, etc. – and by the risk of being harassed and feeling unsafe there. The aim of these exploratory walks is to recommend measures to support women's use of public space and reduce their feeling of being unsafe. In Canada, the outcome of these experiments showed that their proposals could benefit all of the population, not just women. The city of Montreal lists six elements for a safe urban environment: 1/ ease of getting one's bearings; 2/ visibility; 3/ the presence of people; 4/ surveillance; 5/ cleanliness and maintenance of facilities; and 6/ community participation in urban planning.

Since the 2000s, this method of exploratory walks has been reproduced in France. The association À Places Égales in particular organises exploratory walks and offers advice to local authorities to promote such experiments. Based on their work, a guide was published in 2012 for the CGET (General Commission for Territorial Equality) on exploratory walks in disadvantaged neighbourhoods[27]. In 2014, an experiment in exploratory walks 2.0 was launched, supported by the CGET and coordinated by the France Mediation network. It aimed to strengthen women's participation in local democracy, to improve the urban environment and safety of low-income neighbourhoods, and to promote the use of digital technology as a tool for civic engagement (CGET, 2016). Prior to the walks, the participants established an area to be explored based on their usual routes. Then the walks took place during the day and during the evening to fully consider the different contexts in which women might use these areas. The walks used a geolocation tool which enabled them to analyse the identified issues. This experiment was conclusive as it proved that these walks were useful for identifying issues and offering solutions, but also for involving local women in their community, since they led some women to take part in local organisations such as citizen councils (CGET, 2016).

6.2.2.4. Promoting gender mainstreaming in urban policies

More generally, in order to encourage a more equal sharing of the public space between women and men, gender issues must be considered across the board in all territorial policies – a process otherwise known as gender mainstreaming. This is a concept designed to improve public policy by systematically considering issues pertaining to gender, to inequalities between men and women, and to the efforts required to promote equality. In doing so, gender mainstreaming aims to replace a sectoral approach of public policy with an integrated one. The aim is for all public policies to consider gender issues in all domains and not just by introducing specific policies in favour of women. In

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[27] Parisdugenre.fr

France, this process is described as an "integrated approach" in article 1 of the French Act for Real Equality between Women and Men, passed into law on 4 August 2014.

Gender mainstreaming principles have been elevated to the international stage by the United Nations programme Safe Cities Free from Violence Against Women and Girls, which seeks to combat sexual harassment and violence against women by relying on international and local women's organisations. The program has been launched in twenty cities in Africa, India and Latin America as well as in cities in the northern hemisphere. The United Nations also supports cities to implement programs promoting safer cities for women. Finally, best practices are also promoted internationally through organisations such as the NGO Women in Cities (Femmes et Ville).

In Europe, all countries have adopted gender mainstreaming since the early 2000s. A Charter for the Equality of Men and Women in Local Life was proposed in 2006 by the Council of European Municipalities and Regions. It was signed by more than 1,500 European cities, who then committed to implementing a plan for equality. Several European cities are even pioneers in terms of gender mainstreaming, notably Vienna, which published a guide with principles for urban planning that have since been taken up by many European countries. The goal is to be more polycentric and establish cities of short distances, by promoting a good network of shops, activities and services throughout each area, and by encouraging dense and diverse functions. It is also a question of producing high-quality public spaces that allow diverse uses, promoting active modes and ensuring that pedestrians have a pleasant experience. Participatory democracy is also encouraged by involving men and women in differentiated workshops. Urban planning must also be informed by an in-depth diagnosis of uses and practices that does not exclude anyone – including drug users, sex workers, young idlers, etc. This is to make sure that urban developments are not influenced by stereotypes or standard profiles, to avoid favouring able-bodied, heterosexual, mobile and middle-class men to the detriment of others, and thereby uphold everyone's right to the city[28]. Furthermore, stereotypes can also be deconstructed through specific signage: priority seats for parents in public transport, for instance, are designated by a logo representing a woman or a man with a child.

Barcelona is also a pioneering city for taking gender into account in urban planning. The first city plan for women dates back to 1991. The city council that came to office in 2015 created a Department for Transversality to promote the inclusion of gender considerations in all municipal actions. Barcelona stands out in particular for an approach that goes beyond considering women's issues: in 2007, the city created a Feminism and LGBT service as well as an LGBT Plan, designed in consultation with the Municipal LGBTI Council formed in 2004[29]. The service works in particular with urban stakeholders, businesses, neighbourhood councils, festival organisers, sports facilities and nightlife venues (nightclubs, etc.) to fight against sexual harassment and assault.

Finally, in France, the "new generation City Contracts" introduced in 2014 were to be based on an equality assessment, for which the CGET (General Commission for Territorial Equality) provided tools to help communities address these issues. In 2016, the City of Paris published a reference guide entitled "Gender and public space" to build "an egalitarian urban environment," produced in collaboration with the City, academics and expert organisations. It called for an integrated approach

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[28] Parisdugenre.fr
[29] Parisdugenre.fr

to gender equality that would span all City policies. The guide first recommends fine-tuning our understanding of men's and women's mobility through studies, surveys and counts. Then it focuses on measures such as:

- Accessibility: widening sidewalks, installing ramps for people with strollers or shopping trolleys, etc.
- Pedestrian traffic: providing safe walking around the city, improving the public perception of pedestrians, installing public toilets, etc.
- Signage: ensuring the visibility of names, checking the location and clarity of signs, ensuring the maintenance of the signage, etc.
- Access to services.
- Waiting areas: improving visibility and lighting at bus and tram stops to prevent harassment.
- Cycling: developing cycle paths, encouraging women to cycle, etc.
- At night: making the city more welcoming and safer at night, with entertainment, good lighting, accessible parks, and available public transport.

Finally, we should note that gender issues are being introduced into the training programs of current and future urban planners. For example, the research institute of Genre et Ville provides training programs on how to integrate gender issues into urban planning processes. Officials from the General Council of Hauts de Seine and from the City of Saint Nazaire and the CARENE urban area have already participated in these programmes. Since 2021, Genre et Ville has also been offering a specific course in an urban planning school in Paris[30].

6.2.2.5. The fight against harassment and assault in public spaces and on public transport
6.2.2.5.1. Growing consideration by stakeholders

There are different types of solutions that could make women feel safer in public spaces and on public transport. This seems to be increasingly discussed by public actors and mobility professionals. In 2021, the Crime Prevention Award organised by the French Forum for Urban Security focused on the theme "mobility and security."[31] Several candidates - cities, associations, transport operators etc. - presented initiatives aimed at promoting safer mobility for women (helping victims of assault, fighting against harassment, etc.). The three winners selected by the jury were actors who put the fight against gender-based and sexual violence at the heart of their system.

Similarly, the DIAMOND Project, a European research project conducted between November 2018 and January 2022 as part of the Horizon 2020 program, aimed to propose solutions for specific gender-related needs in current and future transport systems. The project identified and assessed several proposed measures responding to the needs and expectations of women both as users of different travel modes (public transport, autonomous vehicles, etc.) and as workers in the transport sector. While it is hard to assess the actual interest in the project and its effectiveness in moving

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[30] Genre-et-ville.org
[31] https://ffsu.org/prixprev-2021/#:~:text=L'%C3%A9dition%202021%20du%20PrixPrev,elle%20est%20adapt%C3%A9e%20aux%20needs.

towards more inclusive transport, it nevertheless demonstrated a desire to introduce gender issues into the practices of transport professionals.

Box 3: Presentation of two winners of the 2021 Crime Prevention Prize

Presentation of two winners of the 2021 Crime Prevention Prize

Two of the three winners implemented measures to fight harassment on public transport.

1. **Sytral and Keolis Lyon**

Since 2014, Sytral and Keolis Lyon have implemented a strategy for safety and crime prevention in Lyon's public transport network. The fight against sexual assault and sexist harassment is central to this strategy and is based on various actions: raising awareness, training drivers and conductors, taking exploratory walks, setting up a stop-on-demand service, and annual surveys on safety issues and sexual harassment. This initiative won first prize.

2. **Stand'Up**

The third prize went to the Stand'Up program, which came out of an international training program by L'Oréal Paris and the NGO Hollaback!, deployed in France by the French Women's Foundation (la Fondation des Femmes). This program aims to raise awareness and train both victims and witnesses of sexual harassment in public places, to give them the means to stop it. The training, based on the 5D method (Dialogue, Delegate, Document, Distract and Direct), teaches participants how to react safely in case of harassment, whether as a victim or as a witness. For example, a witness of harassment can speak to the person being harassed to show empathy and offer assistance, pretend to know her to divert the aggressor's attention or even film the scene. Victims and witnesses can ask for help from a nearby person or an authority figure (driver, conductor, staff member, etc.) or even, as a last resort, ask the harasser to stop, all the while making sure to remain calm to prevent escalation. The participants in the training are confronted with realistic situations in which they can test these different responses.

6.2.2.5.2. Some examples of measures implemented to combat safety threats and harassment

- **Urban responses**

Marie Gilow notes that many urban planning programs offer urban responses to safety issues (Gilow, 2015).

In its 2016 guide for an inclusive city, the City of Paris first recommends refining our understanding of safety issues through victim studies, local audits, and gender statistics. The point is to objectify our representations of safety issues. Then, several measures are recommended, in line with gender mainstreaming (see 6.2.): visibility, lighting, activity & entertainment, etc. To fight harassment, the

guide recommends organising communication campaigns or even setting up night kiosks to address questions about the dangers of alcohol and drugs, as well as sexual harassment.

- **Promoting cycling**

Yves Raibaud also recommends promoting cycling, which as we have seen can be a safe means of transport for women. This requires addressing women's feelings of being unsafe at night - as reported by women in the Bordeaux survey (Raibaud, 2018) - which can be done for instance by creating dedicated and well-lit cycle paths.

- **Apps**

The City of Paris also mentions apps such as AppElles and Handsaway which allow women to have "guardian angels," i.e. contacts who are notified if they run into trouble. These apps also make it easier to call victim support and helplines (City of Paris, 2016). Other apps exist, with some that geolocate dangerous areas.

While these apps can be useful, some feminists criticize them for endorsing a kind of tech solutionism that relies on digital solutions to solve problems of harassment and insecurity. Indeed, these solutions can have perverse effects. Apps that geolocate dangerous areas have been accused of adapting to the existence of such areas and acting as workarounds, therefore entrenching the issue instead of trying to solve it. The feminists who criticize these apps call for more efforts to be placed on situational resources rather than digital solutions. For instance, improving women's ability to call upon bystanders, by making people aware of the problem and encouraging them to act, as promoted by the Stand'Up program (see box 3), would be much more effective than calling on a remote emergency contact.

- **Stops on demand**

Following a study carried out in Toronto in 1989 on women's safety in some sixty subway stations and bus stops, the city introduced an evening on-demand drop-off service between stops, allowing women to alight closer to their destination (Gilow, 2015). This system was recently implemented in several French cities, notably Orléans and Bordeaux in 2019, in a move initiated by the Keolis company in collaboration with both cities. The goal of this service is to fight against insecurity and harassment. From 9 or 10 p.m., any passenger can ask the driver to drop them off between two stops, in a well-lit and safe place. According to an article in the Bordeaux-Gazette,[32] users have taken to this system, seeing it as useful. At the end of 2020, Île-de-France Mobilités also decided to implement on-demand stops at night on all of its bus lines, after initially testing it on around sixty[33]. The system is gradually being extended to all bus lines[34].

- **Women-only metro carriages**

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[32] Rinaud J., March 2019, "Bus : l'arrêt à la demande pour lutter contre le harcèlement sexiste" [Bus: stops on demand to fight against sexist harassment], Bordeaux-Gazette, consulted on 3/06/2021.

[33] Guédon C., November 2020, "Île-de-France : vous pourrez bientôt descendre de bus entre deux arrêts en grande banlieue" [Île-de-France: you will soon be able to get off the bus between two stops in the suburbs], Le Parisien.

[34] https://www.iledefrance-mobilites.fr/actualites/surete-ile-de-france-mobilites-s-engage-pour-des-transports-plus-surs

To improve the safety of women on public transport and fight against harassment, several cities have tested women-only metro carriages. Marion Tillous examined the challenges of this measure based on several case studies (Tillous, 2017a; Tillous, 2017b).

Implementing the system: social and political challenges

As Marion Tillous reminds us, institutional and non-institutional actors regularly plan to implement women-only metro carriages – which are also often accessible to children and people with reduced mobility – in order to fight sexual harassment in transport. They are particularly prevalent in Latin America, Southeast Asia, Japan, Central Asia and India.

In 1863, women-only carriages were implemented on the London underground, followed by New York and Tokyo at the beginning of the 20th century. Marion Tillous shows that such measures are underpinned not just by gender issues, but also by class issues. For example, in Japan, women-only carriages were implemented to protect young and well-off women studying in central Tokyo from the prying eyes of male workers coming from lower-income backgrounds who were seen as potential sexual aggressors – despite the statistics on filed complaints that showed that this assumption is wrong (Tillous, 2017a; Tillous, 2017b). Meanwhile, in the early 20th century, the United States implemented the system both to protect women from inappropriate male behaviours and to encourage working-class women, who were suspected of complacency towards such behaviour, to adopt more suitable and feminine attitudes. As such, the introduction of women-only carriages was historically a response to power imbalances in terms of gender and class, whether to protect upper-class women from working-class men or to educate working-class women.

Establishing women-only carriages can also form part of a broader desire to set an example in terms of women's rights on the international scene. São Paulo and Cairo, for instance, introduced women-only carriages in the early 1990s at a time when women's rights were put on the agenda of international organisations. In São Paulo, the first bill was introduced in 1994, a year before the last of the major World Conferences on Women, held in Beijing in 1995. Meanwhile, in Cairo, as the Egyptian government sought closer relations with the United States, introducing women-only carriages was a way of appearing exemplary in the eyes of the international community (Tillous, 2017b).

The arguments for and against this system

In the 1990s, feminists largely rejected the prospect of women-only carriages because, according to them, they would isolate women and increase segregation. At the same time, others criticised the excessive presence of women in public space and called for their return to the household (Chicago Tribune, 29/05/1992, quoted by Tillous, 2017b). Indeed, at the turn of the 20th century, working-class women in the United States were opposed to dedicated carriages, arguing that they were equal to men and that if conventional subway carriages were good enough for men, they were good enough for them too. Other objections to the system in the United States were, for instance, that one carriage would be insufficient for all the women needing to travel, or that, with these carriages, men may be less inclined to offer their seat to a woman in the other mixed carriages (Tillous, 2017b). In São Paulo, the introduction of women-only carriages in the 2010s caused some controversy, with one feminist association pointing out the risk for women who continued to travel in mixed carriages to be accused of complacency towards sexual harassment. These feminists also claimed that women-

only carriages would naturalise gendered social relations, by implicitly assuming that men are potential aggressors who cannot contain their impulses, and risk leaving out transsexual and non-binary people, thus entrenching heteronormativity in society and neglecting the issue of men who are also victims of harassment (Tillous, 2017a). Therefore, at all times and in various contexts, feminists have widely opposed women-only carriages.

The arguments in favour of this measure, as well as the actors championing it, have varied over time and depending on the context. As we have seen, Marion Tillous has shown that while this system seems to primarily respond to gender issues, it is actually intricately connected to class. While in the early 20th century, women-only carriages were mainly intended to encourage social distancing as we saw above, nowadays, they are most often demanded by working-class and employed women who are regular users of public transport. This is the case, for instance, in São Paulo. With motor vehicles becoming more widely available, subways are now used more by the working classes, and urban sprawl has made part of the population regular users of public transport in order to access jobs. Sexual assault in public transport is particularly violent for people who depend on public transport on a daily basis, as shown by Marion Tillous' analysis of São Paulo where sexual assault on public transport is widespread (Tillous, 2017a). Introducing women-only carriages, according to one feminist organisation that defended them, is a way of politicising the issue of harassment and alleviating women's guilt, by freeing them of the responsibility to defend themselves against attacks (Tillous, 2017a).

- **Communication**

Given the greater levels of public awareness about harassment in public transport, in part thanks to the issue receiving more publicity since the 2010s, several anti-harassment campaigns have appeared in recent years. But, as Anne Jarrigeon points out, they are not without their own ambiguities. In 2018, an anti-harassment campaign was launched by Île-de-France Mobilités, the RATP and the SNCF, showing frightened women clinging to metro bars while approached by animal predators (Figure 7). However, this campaign appears "more frightening than emancipatory."[35] Indeed, it positions sexual assault as an animalised behaviour, when in reality it is the fruit of unequal social constructs that promote male domination. Presenting the predators as animals dehumanises them, even though sexual aggressors can look like anyone. This "othering of the sexual aggressor"[36] limits the ability of men to identify with him. Moreover, according to the blog Crêpe Georgette, this campaign places the responsibility on the victim to raise the alarm.[37]

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[35] Parisdugenre.fr

[36] Blog Crêpe Georgette, quoted by Les Inrockuptibles, March 2018, "Pourquoi la nouvelle campagne de lutte contre le harcèlement dans les transports fait-elle débat ?" [Why is the new anti-harassment campaign in public transport controversial?], consulted on 3/06/2021.

[37] *Ibidem*.

Figure 7 – Anti-harassment campaign posters by Île-de-France Mobilités, the RATP and the SNCF 2017-2018

Anne Jarrigeon (2019c) thereby shows how public awareness of sexual harassment and its media coverage over the past ten years may have had some perverse effects: the measures put in place are often ambivalent, or even contribute to reinforcing sexist stereotypes and therefore gender inequalities. She worries that the effects of these ambivalent measures are not sufficiently documented. She calls for people to be "wary of good intentions, especially if they are paternalistic." Campaigns and measures to prevent sexual harassment need to fully consider their possible effects

with regards to women's emancipation. It is not so easy to produce measures that support the emancipation of women. Anne Jarrigeon therefore calls for a cross-disciplinary and intersectional awareness, that considers both the gender and social issues that are at play (Jarrigeon, 2019c).

Feminists underline the importance of designing measures that do not just point out a problem - sexual harassment - but actually contribute to changing sexist norms and stereotypes, by anticipating their own consequences. For American feminist Andrea Dworkin, men themselves have their part to play in transforming mentalities. In a famous speech delivered in 1983 before an assembly of women's rights activists who were almost all men, she vehemently called on them to act and bring about change, in particular by fighting against rape. Dworkin reminded them of women's vulnerability in the face of male violence, which itself is the expression of a male domination at the very root of how society functions. She claimed that this domination signals to men that they can rape, hit and hurt women, who are meant to be available to satisfy men's needs. She then called on male activists in her audience to make themselves aware of this unequal system which legitimises the violence of men against women, to work on their own mentalities and to strive to change those of other men, especially by fighting against rape – seen as the epitome of male domination (Dworkin, 1983). Therefore, according to her, one way to change the norms anchoring male domination and its subsequent violence in society would be to widely mobilise men and rely on them to drive a mass change in mentalities.

Conclusion

The measures presented in this last part aim to increase women's access to public space and transport by improving their comfort and safety through two main solutions. On the one hand, they seek to make these spaces more welcoming, less anxiety-inducing and to prevent harassment by ensuring the presence of people and activities, and averting risky situations by various means: lighting, entertainment, women-only carriages, stops on demand, etc. On the other hand, they aim to fight harassment by raising awareness among aggressors, victims and witnesses. These kinds of solutions, depending on how they are implemented, can have their own pitfalls, but the vast majority of them also tend to fight sexist and sexual violence without really tackling the root cause of it. Finally, beyond urban planning responses and punitive policies, feminists call for actively changing the social norms by which men dominate society - and by extension the public space - and by which women are seen as vulnerable.

General conclusion

This work shows that mobility is an area of society in which the gender norms that govern it are particularly visible and consequential. The first part reminded us that most Western societies have a bicategorised and hierarchical social organisation, with two distinct sexes – female and male – that each have specific social roles and in which men exert power over women, who are reduced to sexual and maternal functions. Due to a belief that women are by nature fearful and gentle, they have for centuries been associated with the indoors, with domestic life and childcare, and therefore with immobility; while men, who are seen as adventurous and brave, are masters of the outside world, of the public sphere and therefore of mobility. As a result, public spaces have been designed predominantly by men and for men, which is why they have largely neglected women's experiences. Many spaces are therefore unsuited to the needs and aspirations of women.

Research shows that despite recent evolutions, women today still perform the majority of domestic chores – shopping, childcare, accompanying others, etc. Many women struggle to get around when they are with children or pulling shopping trolleys on narrow sidewalks or in subway stations without elevators. These constraints therefore impact women's modal choices: many mothers, for instance, opt for a car to help them complete all the tasks they have to deal with. These hindrances also impact the range of women's trips, which are more centred on the home and its surroundings than those of men, as well as how their trips are organised, with women chaining several activities into one journey.

Then, the research analysed how public spaces are unwelcoming for women because male domination is manifested there in various ways, notably through sexual harassment. Most women have experienced it, especially in public transport. It functions as a constant reminder that men are dominant in the public space, that women are unwelcome there and that they run the risk of being attacked there. Women feel much more unsafe in the public space than men, which leads them to implement a range of strategies to avoid stressful situations, from altering how they dress, to adopting a certain body language, to even completely avoiding going out alone at certain times. Women's feelings of being unsafe therefore profoundly affect their mobility and lead some of them to remain immobile.

Finally, this research indirectly reveals that mobility does not just reflect gender inequalities, it maintains and reproduces them. Having long been expected to remain immobile by their assigned social role, women feel unsafe in a public space dominated by men. As a result, they are forced to adapt their activities, movements and behaviours. According to the authors who study this issue, sexual harassment, the various forms of bullying that women are subject to in the public space, as well as their coping mechanisms, are all acts that constantly repeat and maintain an unequal system based on male domination and female vulnerability.

Various solutions have been implemented to make public spaces and transport safer, more welcoming and better suited to women's needs, such as urban planning measures. Anti-harassment campaigns have also been organised, particularly in recent years with the growing media coverage of violence against women. However, these measures are not straightforward; some are accused of reinforcing stereotypes, such as women being vulnerable in the face of dehumanised attackers,

creating a social distance between the ordinary men who harass women and the animals used to represent them. Finally, instead of pursuing further campaigns with messages that people cannot identify with, one lever could be to encourage everyone to fight against a problem that concerns each and every one of us, and that includes men just as much as - if not more so - than women.