



# The gender perspective in sustainable urban planning

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**Abstract:** As for any other discipline, urban planning can only be considered sustainable if it combines care for the environment with the satisfaction of social needs and economic balance. Given that women make up almost 50% of the world's population, urban planning that neglects women's needs is not sustainable. Numerous studies show that mobility patterns vary according to gender and are linked to people's daily activities, which also depend, among others, on the economic and educational level. The other way round, limited mobility opportunities lead to some women's restricted access to particular activities. This work aims to briefly explain existing inequalities and their potential solutions under different boundary conditions.

**Keywords:** gender gap; gender perspective; equitable urban planning; mobility patterns

## 1. Introduction

The gender gap is still a reality in many areas, and urban planning is no exception. The good news is that the existence of this gap is now widely accepted, which is the first step to solve it. In addition, this topic attracts considerable interest among researchers, administrations and private companies. Small improvements are therefore being introduced, although there are still many unresolved problems, especially in developing countries [1]. Note that urban planning is closely linked to accessibility to the different activities and to mobility. It thus has fundamental consequences on people's lives and can affect their employment and educational opportunities. Also, people's autonomy.

In its broadest meaning, the word sustainability implies not only care for the environment and responsible consumption of resources, but also their balance with meeting social needs (irrespective of gender, age, abilities, social status, etc.) and the economy [2]. Therefore, sustainable urban planning must also address these three aspects and, particularly, try to close the gender gap within its sphere of influence.

To this end, it is essential to know which variables related to urban planning play a major role in its classification as gender-sustainable or not. According to the concept of cities as "complex dynamic systems of systems" [3], these variables are in turn interconnected. The first group are the urban form and the urban sprawl, together with the location of activities. Generally, cities originate around a core where certain basic social needs are met. In the past, for example, an area located near a river and/or a fertile land, or in a place of easy defense. For more modern cities, a thriving economic activity may cause an area that was originally a destination for commuters to become their place of residence and continue to grow. From this core, the growth of cities and their expansion generally has geographical guidelines. However, the socio-economic activities usually complete their definition. In fact, there are several city models: those that concentrate the economic activity, especially the service sector, in the center and make their metropolitan area residential and/or dedicated to the primary sector (the most common case. E.g. Chicago, in USA); those that maintain a residential core and move most of their economic activities (normally industries, i.e., secondary sector) to the periphery (e.g. Arteixo, in Spain), those that combine economic and residential uses in most areas (e.g. Munich, in Germany), etc.

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It is often the case that residential areas are themselves divided, generally according to the social class and wealth of individuals [4]: those in the upper-middle class live in business centers or in residential areas far from their place of work, while those in the lower class or those with economic difficulties usually live in marginal peripheral areas. Another factor to be mentioned is that of public safety: generally, in business centers there are incidents that do not seriously affect people's integrity, at least during the day, while safety in peripheral residential areas is again linked to the socio-economic level of their inhabitants. Finally, the location of housing in relation to work, shopping, education, leisure or health areas clearly results in mobility needs to access the corresponding activities [4]. These mobility and accessibility needs are better or worse covered, basically, depending on the public transport network in terms of supply (accessibility, area covered, frequency, prices, etc.). The possibility of using private vehicles or soft modes of transport also plays an important role, but these means are suitable nor for all users (e.g. those that cannot afford a private car, the elderly) nor for all situations (e.g. a mother with his baby). Note that the former variables have many other implications (e.g. in defining the energy efficiency of an urban area) that are beyond the scope of this paper.

Urban planning is sustainable from a gender perspective if it provides all women, regardless of their age, socio-economic status or education, with the same accessibility to activities as men. But to all activities, not only to those traditionally attributed to women (e.g. child or sick care, shopping). To this end, it must be considered that the same level of accessibility may imply different requirements for female than for men [5]. The clearest case would be that of a woman in an advanced state of pregnancy. However, there are many other examples, such as the feeling of insecurity in the street at night or while using public transportation, which is more acute (and unfortunately justified) in women [6], or women's different levels of acceptance of certain transport solutions (e.g. automated vehicles, carpooling) [7, 8].

In any case, it is well known that the gender gap regarding accessibility to activities, but also in general, is highly related to aspects inherent to women themselves. These are, for example, their culture, their religion, their social level, their education, their aspirations or positive/negative previous experiences while moving, i.e., while accessing a particular activity by means of a particular mode of transportation [9]. Additionally, they can be influenced by the characteristics of their immediate environment or their families' traditions, as well as somehow limited by the structure and organization of their households [10]. Although these aspects are outside the scope of urban planning, this can help to mitigate their consequences. To give a very simple example, one woman from a patriarchal, low-income family who is responsible for maintaining the household and caring for her children will find it easier to accept a job if she has good, safe and efficient accessibility (i.e. means of transport) to this job and to her "traditional" activities, i.e. school and shopping. She may still decide not to work, but if accessibility is good, she can at least consider it. Figure 1. summarizes the above-mentioned interrelationships.

The former explanation, although simple, is useful to understand the role of urban planning in gender equity. The needs to close this gap are different in developing countries from in developed countries. The following section briefly explain these differences and give concrete examples of how they are being addressed.

## 2. Methodology

This paper, which is the first step in what will be a more extensive research, summarizes very succinctly some ideas that experts in urban planning and/or mobility from different fields (university, business, administration, citizen groups, etc.) have shared in several meetups organized around the Women in Urban Mobility project (an international project financed by the EIT Urban Mobility, of which the author is one of the coordinators). These ideas have been collated and expanded with a review of the state of the art.

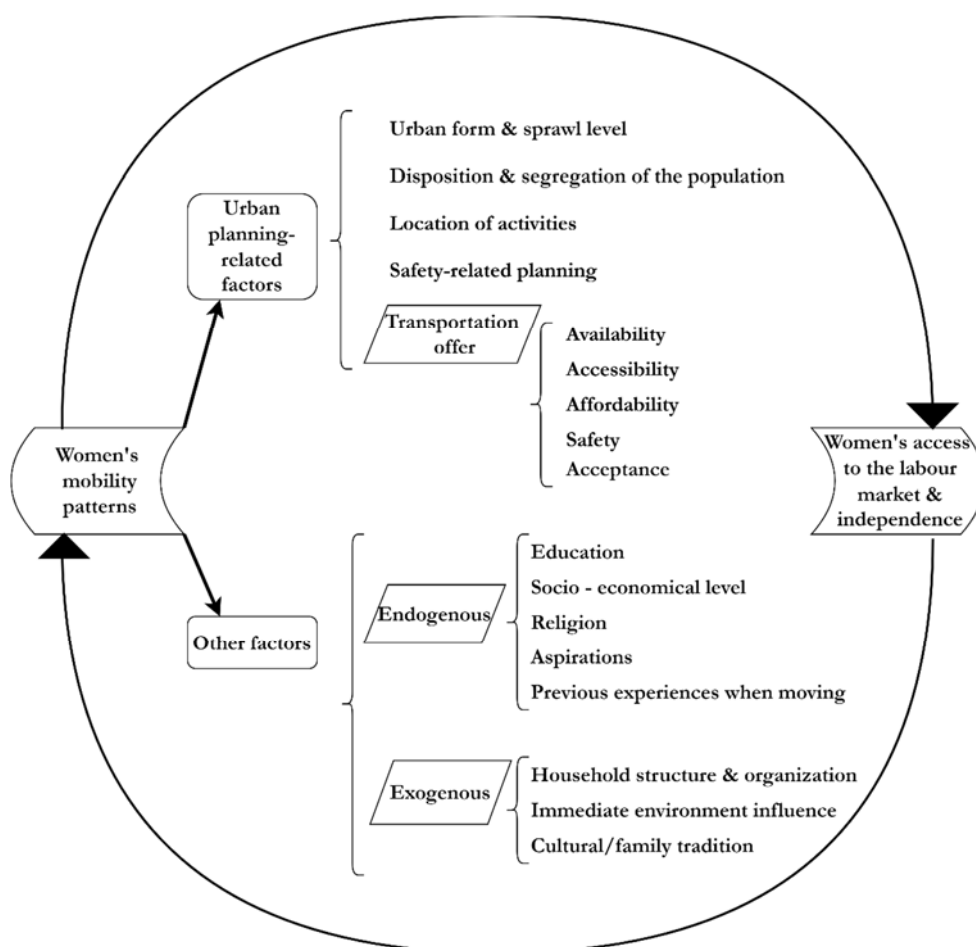


Figure 1. Main factors affecting women’s mobility patterns and thus their quality of life and opportunities

### 3. Developed versus developing countries

Many causes of gender inequality in urban planning and mobility are universal. However, others largely depend on the environment in which the concerned women live. **Table 1** summarizes some of these issues, including proposals for improvement.

In a very succinctly way, four problems affecting women have been highlighted: their more complex travel patterns linked to non-work activities, their greater personal vulnerability and their higher standards for accepting a certain mobility solution, often related to their lesser taste for risk or to their travel conditions (with children, with goods, with certain women-only clothes/shoes). In the case of developing countries, all these problems are exacerbated by the lack of economic independence, women’s lower social status and the lower quality of transport systems. Commonly, also by the lack of urban planning.

There are different attempts to solve these issues, targeted to the level of the challenges. In developed countries, women are increasingly becoming decision-makers in the field of urban planning and transport. Thus, the gender perspective is gradually being introduced. Simple actions such as better lighting of streets and stations or the adaptation of means of transport to better accommodate pregnant women or pushchairs are examples of implemented initiatives. In developing countries, these solutions are complemented by more disruptive ones, such as the implementation of women-only mobility services. In principle, their main objective is to avoid harassment, but some of them also try to adapt to women’s mobility patterns. Also, for example organizations like the World Bank are training transport operators to intervene and stop sexual harassment in a non-violent way. Companies provide free Wi-Fi on the bus, as an app is available to alert the driver. Adding in-between stops to routes, especially at night, is another successful trend.

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**Table 1.** Urban planning and transport-related issues affecting women and proposals for improvement.

Issue	Features in developed countries	Features in developing countries	Examples of initiatives for improvement
Lower penetration in the labor market and less relevant jobs	Superwomen: mothers, caregivers, housemaids and workers Preference for part-time jobs close to home	Lack of education and patriarchal families Difficulty in travelling due to lack of means	Educational campaigns Employers' facilitation of work-life balance Role models
More complex, not served mobility patterns	Shorter trips out of peak hours Lack of seamless mobility Difficulties when moving with children, cargo, etc.	Lack of private and (good) public transport facilities Difficulties when moving with children, cargo, etc.	Mobility as a service (for female) Off-peak analysis & solutions Women's engagement in mobility 15' cities or similar concepts
Lack of personal safety	Harassment in public transportation Fears accessing or using transport, especially at night	Severe harassment in public transportation Fears accessing or using transport	Security, women-only transport. Also, at night, lighting & clearing of streets & stations, higher density of public transport stops
Lower acceptance of available mobility solutions	More reluctant to automation, bikes, scooters and sharing systems	More reluctant to bikes, scooters and sharing systems. Automation hardly available	Educational campaigns & promotion Analysis of women's perceptions Incentives

**4. Conclusions**

Urban planning must include the gender perspective if it aims to be truly sustainable. Well-defined urban planning must facilitate access to different activities for all people, thus for women. To this end, it must take into account their different needs. Moreover, urban planning can even indirectly facilitate other social changes towards gender equality, such as a higher penetration of women in the labor market, and especially in relevant positions. Concepts such as the 15-minutes city or an efficient, affordable and safe (i.e. harassment-free) intermodal transportation offer are examples of models that benefit all people, especially women. Another key aspect is the need to involve women themselves in the planning process at different levels: as users, as decision-makers, as entrepreneurs, etc. Although they too may fall into some firmly established biases, women are undoubtedly more aware of the existing gender gap and can make proposals for improvement to which all-male teams may not be sensitive, even with the best of intentions.

**Conflicts of Interest:** The author declare no conflict of interest.

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