

Walkability infrastructure as a significant variable in explaining social inequalities between central region and

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Abstract

As well as many other big cities in the Developing World, São Paulo displays a profound inequality between its citizens. Along with income differences, the inequality is revealed mainly in the differences between the periphery and the central regions.

One of the aspects of this inequality is in Walkability.

This article shows that the inhabitants of peripheries rely more on walking than people from other regions, mostly because of the poor public transport and the price of fares. Not only are they obliged to walk longer distances for their daily commutes, but they also face a more challenging environment: lack of walking infrastructure, more beastly behavior from drivers, less control from public organs, more fear of violence and, last but not least, a very uninteresting landscape, with no trees, few shops, benches, bars and other equipments that normally serve as safe points for pedestrians.

In order to illustrate these facts and obtain a perspective from pedestrians, the author conducted a series of group discussions with samples of pedestrians from different regions.

Part of this contrast has very strong roots in the History of São Paulo, when Public Policies failed to provide the booming

peripheries with infrastructure, transit or access. Along with a very weak legislation, peripheries grew to become the concrete example of São Paulo's inequalities.

Poor Walkability is one aspect of these inequalities and it has consequences not only in the mobility of dwellers of peripheries but also in their ability to experience the city, meeting neighbors, shopping, walking to transit, and all the activities inherent to urban contemporary life.

Walkability infrastructure as a significant variable in explaining social inequalities between central region and peripheries in São Paulo

Walking is the principal means of transport in São Paulo¹. Nonetheless, it has historically never been treated as a priority from Public Sector, neither in terms of investment on infrastructure nor in term of public policies¹.

The result of this long process is a paradox: while Walking is the most used means of displacement in the city, pedestrians are 'invisible' to public policies and face an array of problems and challenges: irregular or non existing sidewalks¹, lack of zebra crossings, short crossing times, and a persistent cultural lack of care for pedestrians from drivers. As a result, death rates in São Paulo have

been historically very high and peaked in the 1980's (1,812 pedestrians killed in traffic in 1986), when the Government adopted some gradual measures to mitigate that: implementation of safety belts, reduction of speed limits and control of drinking. Current rate of mortality is around 6,6 deaths per 100,000 inhabitants.

The choice of walking over other means happens because of a reasonably rational decision process based primarily on the relation between distance/price and also on personal safety and convenience. With all the problems, 31% of people in the city use exclusively the foot on mainly short trips to go to the school, or work or shopping. This number, however, doesn't include a very large contingent of people who walk to transit and who aren't included in this figure. If these intermodal itineraries be included, estimates are that a good 1/2 or 3/4 of trips include the foot on a daily basis¹.

Why do people choose walking and where do pedestrians go

When asked, people state that they choose to walk to their destinations mostly because of the distance. "Short distances" account for 89% of the motives for choosing the foot over other form of transport. Other 5% state that transit is too expensive and only 2% say they want to exercise.

The most common destination for trips on foot is the school - 54% of total commutes on foot. 23% are for work, 5% for personal affairs and 2% for shopping¹.

Walkability as a part of Social Inequality

Walking habits aren't evenly distributed among rich and poor, on the contrary. Actually, in São Paulo, the poorer the person, the more he or she will have to commute by foot.

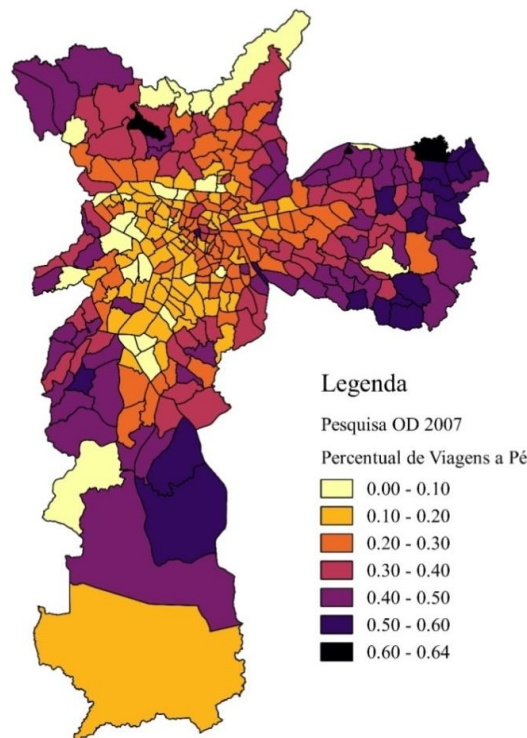


Figure 1. Percentage of trips made on foot daily, by region. Source: Special tabulation with the 2017 OD data¹.

The map above shows that the poorer regions, located mostly in the peripheries of the city, are the ones where the percentage of people who commute by foot is higher (with the exception of the City Center, mostly because of its vast pedestrian network). In some of them, such as Jardim Helena, a neighborhood located in the northwest, between Jaraguá, Pirituba and Brasilândia, trips on foot represent almost 60% of total. In the other extreme, families of wealthy neighborhoods in the West, for instance, use foot in less than 10% of their daily commutes.

It is possible to use the ownership of cars as a proxy to understand the mobility habits in the poorer regions. Basically, people who have cars walk less. Families without cars make 45% of their daily trips on foot¹. This number falls to 28% among families with one car. Not surprisingly, members of households with two or more automobiles, tend to travel on foot even less: only 15% of their daily commutes are made on foot.

Time spent walking

Another data which corroborates the differences between poor and rich regions is the time people spend walking. The total time of walking per day also tends to fluctuate according to income: in poor regions in peripheries, people tend to walk for more time, or for longer stretches, as can be seen in the map below.

The next table that shows the differences in time spent walking by income is very eloquent:

Social Bracket (in SMs – Minimum Wages)	Average time spent on every walk (in minutes)
No income	25
Less than 1 Minimum Wage	36
1 to 2 Minimum Wages	32
2 to 3 Minimum Wages	25
3 to 5 Minimum Wages	21
5 to 10 Minimum Wages	17
10 to 15 Minimum Wages	14
More than 15 Minimum Wages	15
Total	26

Figure 2. Time spent walking by trip, according to Income Bracket. Source: OD Research

The data explicitly shows that people from lower income brackets walk more than the ones from higher income brackets. Inequality is expressed clearly if we compare the extreme. The ratio of time spent between poor and richer brackets is almost 2:1; or, in other words, trips from poorer people typically last twice as much as the rich's.

A person in a family which makes less than one minimum wage walks on average, 36 minutes per day (the sum of all his/her trips). On the other side of the social spectrum a person making more than 15 minimum wages a day would walk only 15 minutes a day.

Why are peripheries so poorly served by public equipments?

Peripheral regions of São Paulo have had their development based on private incorporations, set apart from the more central regions, in what concerns access to basic infrastructure, and with specific and more permissive legislation. This is the case of sidewalks, for instance, which in the central regions have always been reinforced, and neglected in peripheries.

According to Marta Dora Grostein, a teacher and researcher from FAU USP, poor infrastructure and lack of public policies have been a mark of peripheries since the beginning of 1930's, when the influx from migrants from other parts of the country started to grow, following the process of industrialization. In the 1970's, another wave of Brazilian migrants heavily increased the demand for housing and urbanization. This period marks the boom in slums and informal settlements, which accounted for around 1% of total housing in 1973 and boomed to an astonishing 19% in just two decades¹.

Another factor that contributed to the poor quality of the urban environment has to do with mobility. Most of the allotments have always had little connection to the city center, typically a bus line with very few cars, taking workers to the center in the morning and bringing them back in the afternoon. Very little care has been devoted to sidewalks, which also demonstrate the very lenient laws of urbanization, as can be seen in the picture below.



Figure 3. Street in Tremembé, a neighborhood in the north of São Paulo. Source: Personal Archive

Qualitative Research – The perception of pedestrians about walking and the built environment

In order to illustrate how pedestrians perceive the act of walking, this author conducted a qualitative research, based on focus groups, with people who walk at least 20 minutes a day, on average.

Divided in four groups, by gender and location, the research generated a very interesting panel of the worries and pleasures of those who walk on foot. From the point of view of this article, the most interesting results are the ones that regard the differences in the experiences from people who live in central areas and the ones who live in peripheries.

Basically, both groups reported the same difficulties in walking – bad sidewalks, aggressive behavior of drivers, fear of violence, not enough time to cross streets, etc. However, in the groups from the periphery, there's a clear perception that the experience is worse than in the central regions. In other words, it is possible to say that being a pedestrian in São Paulo carries a series of burdens and challenges, but being a pedestrian in the peripheries of the city is worse in every aspect.

For instance, instead of bad sidewalks, pedestrian from peripheries report a lack of sidewalks, sometimes. Regarding personal safety the feeling is even more accurate: walking in peripheries is more dangerous. The contrast between poor and rich regions of the city, regarding Walkability is staggering, as can be seen in the comparison between the two pictures below:

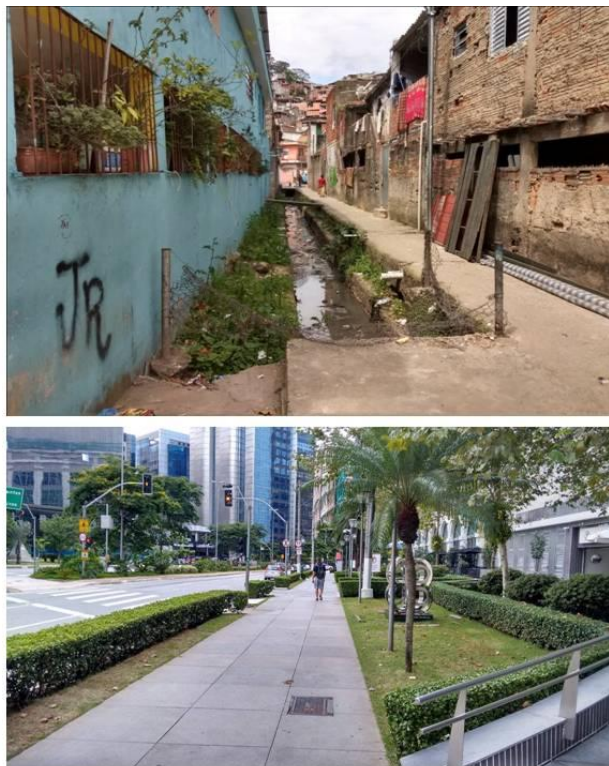


Figure 4; Contrast between poor and wealthy regions. Sidewalks in Jardim Damasceno and Vila Olimpia. Source: Personal Archive.



Figure 5. Pedestrian in Parada de Taipas, a neighborhood in the northwest area of São Paulo. Source: Personal Archive

The same applies to basically every other item of the Walkability network: streets are dangerous to cross, drivers tend to drive in higher speeds and respect less the ones walking. As important as that, are the comments about the perception of safety; while fear of crime is present everywhere it is in the peripheries that pedestrians feel neglected, while walking or waiting for a bus. Not surprisingly, women suffer this fear the most.

Finally, it is important to mention the quality of the environment. Dwellers of peripheral regions in the city are aware of the poor landscape they live in. The landscape is often described as dirty, poorly lit and dangerous. Be it because of the hardships of the ups and downs of the terrain, or the lack of urban qualities, the

peripheries represent a difficult environment for pedestrians.

“Everything is hard in the Periphery. There are no zebras crossings, no traffic lights, no respect [from drivers]; it’s all very different from the Center. In the Center, drivers will stop for you to pass, give preference to pedestrians, in the Periphery, there’s nothing like it”

Woman, inhabitant of a peripheral region, quote from the qualitative research.

Conclusions

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