BODY AND THE CITY: THE IMPASSABLE SPACE BETWEEN STREETS

Ávila, Giovani Manso - Programa de Engenharia Urbana Poli-UFRJ
Brandão, Maria da Glória de Sousa, Programa de Engenharia Urbana Poli-UFRJ
Silva, Othon José de Castro, Programa de Engenharia Urbana Poli-UFRJ

INTRODUCTION

It is becoming smaller the space provided for the main object that moves, and transforms the city: the human body.

The pedestrians circulate around the city with the hard task to bypass series of obstacles created, ironically, to facilitate the human life. Poles, garbage containers, cars (parked illegally on sidewalks). Such equipment beyond the limits of the places to which they were created for, rising to occupy the space of pedestrians, such as paths and sidewalks.

In addition to street furniture, the city incorporates a number of elements which are incompatible with the act of walking the streets like trash, violence, homeless people, and even psychological limitations aspects and time losses to reach the destination.

The bottleneck of paths and sidewalks to extend the process-oriented vehicles is another feature of the impassable spaces.

This work began in 2008 at the meeting “CORPOCIDADE - Debates in Urban Aesthetics”, held between 27 and 31 October 2008 in Salvador (BA-Brazil). The study, titled first as “Whom does the City belong to?” was to develop an urban intervention by making a critical analysis of the bottlenecks of walks and sidewalks of Salvador streets. The starting point is a conceptual work, in order to create an exhibition that would draw attention from both local politicians and the population in order to turn-on the critical gaze of citizens to the urban space, especially for pedestrians’ accessibility.

As an intervention proposal, park benches, once this furniture was created and designed for the human body, as well as sidewalks and drives. The benches were covered by pieces that represented the urban obstacles, showing the appropriation of the space reserved for the human body by street furniture and other elements, in the same way that occurs with walking routes. Figure 1 illustrates some of the “exposition benches”; suggested in the project.
This concept was applied in a specific neighbourhood of Rio de Janeiro city (Brandão & Silva, 2008), in an area that comprises the Laranjeiras’ Street and Cosme Velho Street which, as well as many sidewalks of Salvador and most of the streets of Brazilian cities, suffers from unsustainable planning of urban roads.

The main objective of this study is to get a diagnosis of the problems in the road system of the studied area, based on concepts acquired in the course of research conducted for the project “Whom does the City belong to?”, and through literature. But differently from the early project, this paper will not propose an artistic urban intervention; it will be restricted to the analysis of pedestrians’ accessibility. Figure 2 shows the logo of the project. Some phrases from the centre to the border of this figure says: the engine of consumption is the key system; planned obsolescence; indifference and intolerance; collective loneliness; lack of time; homelessness; lack of air; fear; run, there's still time; disposable life; if you are not happy, create an avatar; click to open a new window; ride a car and stand; a nation on wheels; drive-thru; maximal performance; don’t talk with strangers; dirty.

Figure 2 – Text concept that involves the main problems of public sidewalks, symbol design “Whom does the City belong to?”. Source: BRANDÃO & Silva, 2008.
If you plan cities for cars and traffic, you will have cars and traffic. But if you plan for people and places, you have people and places (KENT, F. - 2005).

2. METHODOLOGY

This paper had considered both practical and theoretical aspects, trying to integrate a global vision of the theoretical problems and the practical of case studies. It has involved the tracking and researching of specialized newspapers, magazines and academicals articles databases that studied the subject based on theoretical observations and field surveys that covered the general points to be analyzed by this paper such as accessibility, pedestrians, urban sustainability and more.

Series of reviews were made, based on articles about the subject, which served as the basis for the development of this work. The case study presented in this paper enable the analysis of factors that would exert the greatest influence over the object of the research.

3. LITERATURE REVIEW

The public sidewalks support the most significant shifting way of man, walking, and this act widely used by the population as “way of transportation". But unfortunately, some people have difficulties using these spaces, because of barriers and obstacles that cause trouble and accidents, especially for people with disabilities, people with limited mobility or reduced mobility (Pizzol & Ribeiro, 2005).

Promoting accessibility is one of the ways to develop integration and appropriation of public space by people with special needs, as blindness, deafness or people with some physical or mental disability that may cause some difficulty of getting around. Through an appropriate environment for driving, free of barriers, designed in accordance with the laws and urban accessibility standards, citizens become able to move easily through the cities, to leisure, business or other activities, which guarantees the right to come and go with greater autonomy and security in urban planning laws (Ferreira, Fernandes and Pereira, 2008) and technical standards of accessibility (ABNT, 1994).

The priority of car using over pedestrians mobility generates exclusionary and unfair public spaces. This scenario is caused mainly by the incentives and transportation projects that are mostly targeted for widening of automotive vehicles, usually separated from programs to improve public transportation, thereby increasing the number of circulating private cars and decreasing more and more the pedestrians fields in the road system (Vasconcellos & Rezende, 2006).

The Brazilian cities need new programs, projects and solutions primarily for the sake of pedestrians’ accessibility, considering, despite of other factors, the quality of life and urban sustainability.
Blockers Elements of Public Tours

Traffic Engineering studies have been tried to facilitate the integration of “excluded pedestrians”, who have mobility difficulty, expressed by any form of architectural and environmental barriers, discriminatory and stigmatizing, in urban traffic.

The paths are spaces that should be the object of attention and concern of cities management but the retraining and restructuring of these spaces are not between the main governments priorities yet.

Plazas, squares, sidewalks, bike lanes, gardens and paths suffer deterioration and obsolescence, caused by lack of maintenance and negligence of the local government.

The public services networks (public services concessionaire) make constantly interventions in the cities, including in public sidewalks, disregarding completely the pedestrian traffic on public sidewalks and roads in general that were created for these same pedestrians, what generates spaces characterized by difficulty in mobility or locomotion.

In the class of sidewalks and sidewalks blocking elements, we can list the street furniture (mainly from services concessionaires), the presence of homeless people, illegal parking, lack of security, among others. Some of such elements will be addressed in the following items. Figure 3 we can see a common picture in the city of Rio de Janeiro, with vehicles obstructing the sidewalks with illegal parking.

![Illegal parking in a Rio de Janeiro street](source: Ávila, 2010)

The Brazilian Federal Law n° 10.098 of December 19, 2000 created general provisions and basic criteria for promoting accessibility for people with disabilities or reduced mobility.

The Federal Decree n° 5296 of 2004 which has regulated and implemented specific rules for the general provisions of Law n° 10.098/2000, and has “law enforcement”; The Brazilian standard rule NBR 9050, deals with issues of accessibility in the urban and architectural context.
Body and the city: The impassable space between streets
Ávila, Giovani; Brandão, Maria; Silva, Othon

space, defines and sets parameters in order to simultaneously satisfy all people, with different anthropometrics characteristics and sensory autonomous, safe and comfortable.

Motor Vehicles and the bottleneck of the Sidewalks

The car, designed to reduce distances and facilitate the movement, is having its place constantly expanded in the urban scenario. The widths of the sidewalks are depressed, in order to give more space to motor vehicles routes, thus hindering the pedestrian walk. Figure 4 presents the advance in street width not preserving the walkers space, mainly for deficient.

Figure 4 – Depressed sidewalks to extend the street in a metropolitan area of Rio de Janeiro. Source: Ávila, 2010.

Another problem brought by vehicles associated with the drivers that don’t follow the traffic laws is the issue of illegal parking on sidewalks and access ramps for people with special needs (elderly, wheelchair users, etc.). The figure 5 below presents a typical disregards from drivers.

Figure 5 – Drivers that don’t follow the traffic laws in a metropolitan area of Rio de Janeiro. Source: Ávila, 2010.
In Brazil, the policy of urban space usage is not equitable and benefits primarily the use of urban space by vehicles in detriment of pedestrians. It is common to find the damaged sidewalks, busy and irregularly junctions, what cause insecurity for pedestrians movement, especially the elderly, children and people with special needs (Ferreira, Fernandes and Pereira, 2008).

**Services Concessionaires**

Besides the difficulty of travel on narrow sidewalks, the pedestrian have other obstacles in the concessionaire furniture. Pedestrians have to share ever-smaller spaces with poles, pipes and other urban furniture.

The public services networks (electricity, water, sewerage, telephone etc.), on the other hand, make constant interventions in the cities, including in public sidewalks. However, the installations performed by these utilities totally disregard the pedestrian traffic on public sidewalks and roads in general are intended only for them, thus generating spaces characterized by difficulty in mobility or locomotion as showed in figure 5.

![Figure 5 – Spaces characterized by difficulty in mobility and locomotion in a metropolitan area of Rio de Janeiro. Source: Ávila, 2010.](image)

Informal business activities are also creators of obstacles to free spaces, and have been making inaccessible the appropriation of space by pedestrians. Such misappropriation of space have being accelerated rapidly, mainly because the high unemployment levels in our society, which leads many people to seek the informal business activities as a way of living and survival (Pizzol & Ribeiro, 2005).

**Scarcity of bike lanes**

The lack of bike lanes in some Brazilian cities directs cyclists to the use of sidewalks, dividing the public sidewalks with pedestrians, which reduces circulation and causes the dissatisfaction of pedestrians, taking them to the edge of roads and streets, exposing them to
motor vehicle traffic, and ultimately increasing the number of accidents involving cyclists and pedestrians.

It is relevant to emphasize that the Brazilian Traffic Code (CTB, 1997), through its Article n° 59, provides and enables the movement of bicycles on sidewalks, conditioned to a specific authorization (to be issued by the responsible agency) and appropriate signage.

Cyclists will be also able to use sidewalks if they just push (carry) their bikes, because, in this case, they will be considered pedestrians.

**The reurbanizations projects**

The process of public policies management of a city can be analyzed under its effectiveness, the rigidity that they are applied some universal measures.

In order to achieve effectiveness, the following factors shall be considered relevant: educational and cultural levels of population, supply of public services and collective needs, monitoring of compliance and punishment for law offenders.

Both government and population must be aligned in order to pursue those factors as well as the processes of planning and urban developments are perceived.

The public authorities are responsible for the supply of essential services to the population, based on a master plan and ruled by a zoning plan and urban structure, which are the same standards, rules and conducts inserted in the city building codes.

Maybe there are some variations in form, but generally the cities, regardless of size, have some knowledge about land use boundaries and growth. People shall respect what was established and ruled by plebiscites, laws, decrees and other legal provisions, but merely the use and modification of equipment within the city.

In general, government and citizens fail in their missions; both must undergo surveillance measures and necessary punishment.

The process of city management can be divided into rigid, moderate or permissive with regards to enforcement actions and punishment.

The best results can be expected, by definition, by those, which are the result of education and cultural formation policies, which are perceived in a medium term, usually, taking several years to be consolidated. Making the population able to be conscious about the advantages and benefits of civility and about the importance of respecting others and the city are always the best and most harmonious ways to achieve effectiveness in urban management.

In any case, measures of control and punishment are necessary for several reasons. Sometimes because the government cannot supply all the population needs and in this case...
there is pressure to optimize the facilities individually, which in the medium term leads to urban chaos. Another times because some individuals are unwilling to work or cooperate with the community.

The process of rigid city management can be understood as the one that once established the rules for land use and occupation, they are constantly monitored and there are significant penalties for offenders, recovering the pattern of land use and cover established. This process has advantages such as constant maintenance of order, the planned growth, and environmental quality, among others. As disadvantages, we can list the high cost of inspection, the discontent among the population due to the lack of freedom and excesses from the authorities, the risk of the plan had not contemplated the best scenario for the area.

The process of moderate city management can be understood as the one in which the changes are dynamic. The extent to which there is public pressure for change in land use and growth plans are reviewed and new rules are incorporated into a specific zoning plan. The advantages of this form of management reside in the possibility of fixing the distortions created during the planning or zoning, considering the city as a dynamic organism, changing and adapting to new needs and technologies. The disadvantages are the possibility of accepting demands isolated from the people who hold more economic power and political or detriment of ordinary people and thus be created distortions in urban structure that can lead to an imbalance in the system as a whole.

The process of permissive city management is the one that the population is slowly changing the land use and cover and government does nothing, because do not supervise or punish offenders. There aren’t advantages in this process, since it produces a true “urban cancer” through a disordered growth and land use outside the standards set by the plans. When this process is at an advanced stage of urban disorder, measures are necessary to rescue the impact of urban development, with measures that cause inconvenience and cost to the entire population because of the need for public works, changes in customs of the population and almost never are effective in rescue that pattern initially established in urban planning.

The period of the municipal management, in democratic countries, it lasts for five years, which term shall be made of the previous audit, developed designs for the current administration and carried out the works that were promised during the election campaign. There is also a need to show some results achieved at the end of the management to prepare for the following season to the next administration. This process has led politicians to take positions with respect to soft enforcement and punishment of offenders with respect to the land use and cover, not to appear unsympathetic to the population.

In some countries there is a limited number of re-elections for single ruler. In these countries, like Brazil, to prevent voter antipathy, the trend of elected authorities has been tolerating changes in the land use and occupation. The consequence of this policy is to engage municipalities, for the next government, with serious distortions and compromising actions that require expensive and high-impact resources from the population to recover the quality
of life. Examples are programs Rio Cidade and Favela-Bairro, that has been happening over the last twenty years in the city of Rio de Janeiro.

The favelas (slums) of Rio de Janeiro came up with the need for workers to live close to work, avoiding the one hand the high costs and time travel shifts from their homes, as established in studies that relate land use and transport (Steiner & Butler, 2007).

The high distance from urban centers lowers the value of land and implies to more expensive transport costs. These relationships between distance and transportation costs brought workers to seek places of residence closer to urban centers were they are cheaper. If the only choice of occupation was the use of space with no commercial value, hills and slopes, with poor accessibility, lack of urbanization and no rules of land use and occupation, even though those people would prefer to take the risks. In fact arose illegal occupation, with its own laws and rules, which, over time, become areas for illegal activities like drug trafficking and the formation of pockets of armed offenders, although the majority of the populations of these areas are composed of legal workers.

The urban structure of these areas was made in a completely irregular way, with unsafe housing, narrow paths and ramps and the curve radii that prevent the entry of motor vehicles. Over time two measures were required by the state: put those people in society, supplying quality of life and eliminate the criminals in these areas. It was developed so the Favela-Bairro that planed these favelas.

After the starting of the Favela-Bairro, the slums have been renamed as “communities”. The following projects were developed for urban infrastructure: electricity, water and health care, paving, signage, and adaptation of some areas to set up urban infrastructure, slope stabilization and adjustment of the safety standards of some residences.

In 2009, the Peacemaker Police Program began in some communities. This program is characterized by the constant presence of police within communities, as a way to improve the elimination of crime. This program has significantly improved the mobility of the population, it cleared the sidewalks and paths, which were blocked by criminals to avoid burn or police operations in these areas.

It is interesting to analyze the processes of municipal management, above described, once the cost of implementing these programs impact was very high for the general population.

The permissive process that led to the slums and the need for planning of these areas could have been replaced by a moderate city management process in some areas where group settlement, urban and long-term financing to low-income population would result in less damage to the population.

The program “Programa Rio Cidade”, established in 1993 during the administration of César Maia (Mayor), was the main instrument of Rio de Janeiro for the redevelopment of public spaces to public traffic. It came up with the need to restore the pattern of land use and cover
in some neighborhoods of Rio de Janeiro, due to lax management process resulted in an urban disorder and disintegration, with changes of illegal use of public spaces, formation of degraded areas, urban chaos, violence and impunity (Medina, 2004).

Several architectural firms were hired and the best projects to urbanized districts covered were selected to be implemented in a planned, standardized, hierarchical, and even scaled system.

The objective of this program was to recover degraded areas, improving transportation systems, traffic and urban facilities and increasing the safety of roads and sidewalks, collecting water, sewage, water supply, aiming to reach a better quality of life for the population (Programa Rio Cidade, 2010).

The projects implemented by the Programa Rio Cidade covering both the technical and the esthetics aspects of the streets, having as main characteristics the extension of public roads, improving infrastructure, parks and public sidewalks, construction of public spaces for leisure, always seeking to restore urban order.


In the neighborhood of Laranjeiras the works of the “Programa Rio Cidade” had among other things, improving traffic flow on street Rua das Laranjeiras toward the Cosme Velho neighborhood with that, the routes for motorized vehicles have been extended narrowing the sidewalks, and worsening the movement of pedestrians. Also was not drawn any space for bicycle paths, increasing the risk of accidents for pedestrians.

The generalized cost of intervention has been very high: disorder for the population with working fronts and deviations, resettlement of residents, expropriations, and also the lack of resources to meet all the districts covered. In the same way of the Favela-Bairro project, it had applied a moderate management process and all these costs could have been avoided, and new works by following the new urban technologies could be deployed with the city providing a development process, rather than having to invest large amounts of money from time to time to have the same pattern of development that was decades ago.

We conclude that a moderate process city management, the dynamic process, presents itself the most appropriate one for the city because it provides a constantly revision and updates the city, in contrast with the permissive that causes costs and disorders to population, although compromising the political process.
The permissive management process is the major cause of the lack of urban accessibility, mainly by changing the layout of the sidewalks. A bar that expands its area by placing tables on top of the sidewalk, a neighbor that is expanding its area invading the sidewalk or putting obstacles out of the urban pattern on them, schools, courses, religious services and other activities that are not licensed or not are permitted by zoning and act as trip generation hubs, causing parking over the sidewalks and traffic jams.

In this process of lazy management, it is normal to observe that the government does not punish those who park in prohibited place, and after a while, leave this site for parking without impact studies and is a charge for this parking. This irregularity becomes a source of revenue for the city, as well as all those activities, which are not provided in the master plan, and zoning, that just end up worsening the transportation system as a whole, because it removes one of its important connections to any commute that is the space reserved for the pedestrian sidewalk. The following is a case study of a specific area of Rio de Janeiro, where a diagnosis is made light of the methodology proposed.

**CASE STUDY AND RESULTS OBTAINED**

We present a case study in the area that comprises the street Rua das Laranjeiras through street Rua Cosme Velho, located in the neighborhoods of Laranjeiras and Cosme Velho, located in the southern city of Rio de Janeiro (RJ).

**Characterization of Study Area**

The study area is located in traditional neighborhoods south of the city, predominantly residential (Figure 7). The alloy studied via the continuity neighborhoods Cosme Velho and Laranjeiras. The site has a high frequency of tourists, which is mainly for access to the Cristo Redentor (Corcovado), one of the well-known landmarks in the world and therefore most visited city, which enhances the concentration of pedestrians in their vicinity.

![Figure 7 – Local Case Study Area. Source: Brandão, M.G.S., 2008.](image)
There are several kinds of infrastructure problems in this area, starting with the road infrastructure. The traffic chaos in the region, is one of their worst problems, traffic jams are common on the site, which prevents the flow of traffic toward mainly Rebouças tunnel.

Because the streets Cosme Velho and Laranjeiras are street linking two major tunnels - Rebouças (Cosme Velho) and Santa Barbara (Laranjeiras) - it increases the impact on traffic on this route, not considering the volume of vehicles that they receive locally.

The rain is another problem. It is located near the river Rio Carioca where under strong rains the river level rises and the pipe in the region does not give exit to the extra quantity of water, causing frequent floods. Lack of maintenance of storm sewers aggravated by the presence of urban waste, carried by rainwater towards the galleries, also cause blockages and overflows.

**Obstacles in the Urban Area of Study**

As the majority of Brazilian cities (as mentioned above), in the studied area pedestrians suffer from the urban space “impassable”, made up of narrow pavements blocked by illegal parking, street furniture, involvement of utilities and cyclists. In the aspect of the construction of roads, urban furniture (telephone booths, newspaper stands, garbage cans, signs) improperly disposed cause trouble and hampering the mobility of pedestrians in these public spaces.

Such problems in the road system of the study area have been flagged in newspapers, magazines, and other media. The following images are sourced these materials.

![Figure 8 – Irregular parking.](source: Duilo Victor – www.oglobo.com.br)

![Figure 9 – Irregular parking.](source: Luiz E. Magalhães – www.oglobo.com.br)
The scenes reflected on the images above showed are repeated every day in the studied area, which shows the indifference of the public sector and the lack of urban planning in the region, but this is not a specific problem, the same scenes are repeated in most Brazilian cities.
Consequences to level of service and system performance

Whereas the urban transport system on the supply side, the government must be aware of the provision of an infrastructure that minimizes the total commuting time of people from urban equipments and implies the adequacy of the arrangements for transport, transfer devices (pedestrian crossings, street furniture, stairs, ramps, lifts, etc.). Also, the sidewalks and paths should be adapted to the population as a whole.

The urban transportation system must operate seamlessly. A common example is the re-routing a wheelchair that have to find a recess on a curb in order to cross the street. Another example is the insecurity a blind person has in intersection failing to aid a tactile floor. All this loss of time should be considered in the performance of an urban transportation system and new studies and proposals for its improvement and optimization must be constantly be developed and implemented in order to provide a better performance.

The displacements are done, in general between urban equipments like home, work, shopping, school, etc. While walking by foot is a way to move from one place to another, it is reasonable to take into account that the sidewalks are also an important component of the transportation systems, linking urban equipments. Usually the sidewalk is disregarded, which is a common misunderstanding.

Table 1 presents the commuting time fore several transports modalities, in each stage of the trip. As we can see, if the station access time increases so much, due to obstacles in the sidewalk or a lack of accessibility, the total time will increase significantly and the user will perceive a low level of service of a system as a hole.

<table>
<thead>
<tr>
<th></th>
<th>METRO</th>
<th>BRT</th>
<th>LRV</th>
<th>Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Station Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>500m</td>
<td>250m</td>
<td>250m</td>
<td>200m</td>
</tr>
<tr>
<td>Time</td>
<td>7.5</td>
<td>3.9</td>
<td>3.9</td>
<td>3.0</td>
</tr>
<tr>
<td>Platform Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>200</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Time</td>
<td>3.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Payment</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Trip (10 Km)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Velocity</td>
<td>40km/h</td>
<td>27.5km/h</td>
<td>20km/h</td>
<td>17km/h</td>
</tr>
<tr>
<td>Time</td>
<td>15.0</td>
<td>22.0</td>
<td>30.0</td>
<td>35.3</td>
</tr>
<tr>
<td>Street Access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distance</td>
<td>200m</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Time</td>
<td>3.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Time</td>
<td>28.6</td>
<td>26.0</td>
<td>34.0</td>
<td>38.4</td>
</tr>
</tbody>
</table>

Notes: 1. Distance in meters / Time in minutes = 4 km/h (walking).
2. BRT – Bus Rapid Transit; LRV – Light Rail Vehicle.

Source: (Learner, 2009).

On the demand side, the urban transportation system users are concerned about the holes in the sidewalks and streets caused by conflicts between the lack of space and the constant attention to the gaps and obstacles on the sidewalks. The lack of pavement causes mud on
rainy days, with the time people takes to access a mode of transport and the difficulties that have to access it.

A connected transportation system must consider the minimization of total generalized cost between urban equipments, providing the best level of services in each stage of trip at a lowest cost to government.

**THE VIRTUAL SPACE AS A SOLUTION**

The technology transforms people’s daily lives, not only the relationship between human body and city, but also among people.

The Internet has become the fastest vehicle to reach different places and meet people, and has become an environment (virtual) for these events. People have been holding virtual meetings, using communication tools on the internet (like skype, msn, icq“I seek you”, etc.), shopping, and performing a great number of activities through the Internet.

The inhospitable environment created by the contemporary city has locked up the human bodies in their homes and offices, once it is easier living there than in “the real world’. The city tends to take the bodies of movement, making them invisible through the urban chaos. Thus, it can be said critically, the virtual space could become one of the possible solutions to the lack of urban planning and negligence of local governments, once you are able to go “everywhere” in a few seconds, what is impossible in the “real world” with its traffic jams on roads dominated by automobiles, and sidewalks full of holes and barriers.

![Figura 15 – Ownership of the virtual space.](source: BRANDÃO, M.G.S., 2008.)
CONCLUSION

After an analysis of the pedestrians flow is possible to suggest the implementation of accessibility criteria as standardized by the Brazilian legislation on established routes on a local scale.

The measures taken may be based, for example, on the layout of urban facilities that shall be built according to the legislation, such as traffic lights with audible, tactile maps, elements of communication for blind people, etc, in order to attend to all users of public space, with or without mobility limitations.

It can be concluded that despite the importance of public sidewalks for pedestrian mobility in urban daily life, they suffer from the negligence of local government and lack of maintenance of urban furniture and structures.

It is necessary the implementation of public policies, which enable a secure and humanized use and accessibility of such spaces, thus contributing to the promotion of the city for all people, regardless of physical or mental limitations.

If our Governments do nothing, people's tendency will be more and more virtualized and the economy will be defined as a "pent-up demand".

People avoids to pay for economic losses generated by the inefficiency of poor transportations systems and poor management of public spaces, and will prefer to adopt "virtual benches", through the use of information and communication technologies that are always being improved.

This scenario will produce, on the other hand, less trips, less fuel consumption and flexibility of working hours and workplaces, but also prevents people from performing the most basic activities for human beings: walking and create physical relationships.

The possibility to choose a place of work away from our homes having quality of life will be a luxury (or have they just become?).

The prioritization of urban projects that aim to provide better quality of life and safety levels for citizens contributes significantly to urban sustainability, encouraging walking paths, which also reduces the dependence on motor vehicles or optimizes it.

BIBLIOGRAPHY


