

Mechanisms for Vitality in Public Spaces

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Abstract: The literature has vastly discussed the way central public spaces are configured, with their barriers and accesses, and how they interfere in people's flow (Hillier and Hanson, 1984; Holanda, 2002). However, even if an specific configuration favours this flow (like a grid), proper mechanisms, that encourage and maintain its frequency and diversity are needed, generating vitality. As argued by Holanda (2013), the vitality of public spaces can only be maintained if there is a continuous movement of people, in space and time. In this sense, some urban planners and specialists in urban issues suggest strategies that enable this appropriation. Based on these premises, the article explores the perspective through Jan Gehl's and Frederico de Holanda's approaches and illustrates the factors mentioned by them, with examples of vitality that could be seen in Brasilia, Copenhagen, Paris and London, cities that are traditionally quoted by specialists on the topic. Results allow us to conclude that aspects existing in public places such as a) buildings regarding pedestrian scale; b) promotion of inviting spaces; c) clear buildings visibility; d) rearrangement and integration of the types of traffic on the roads, as well as the accessibility that allows the movement of pedestrians and cyclists without impediment; and e) the presence of mixed use integrating and distributing urban functions and activities are essential to ensure the continuous people's flow in urban space along the day and, therefore, are basic strategies when vitality is intended.

1. Introduction

As Monteiro (2008 *apud* Colchete Filho *et al.*, 2010) defines, the public spaces are areas that grant access to the public, either belonging to private or public properties. The morphological elements that make part of its configuration include the streets, the alleys and squares, delimited by the buildings. The first three elements are open spaces that allow free access, corresponding to the voids (empty spaces) existent in the urban tissue. The last item points to what the Space Syntax calls "fills", which are the barriers that correspond to places with flow restrictions. Proposed by Bill Hillier and Julienne Hanson around the 1970's, the Syntax addresses a reflection on the group of rules and the guiding principles of the urban spaces, exploring the relations between space and society.

These configuring and structuring elements of the public spaces are usually equipped with a potential that is frequently discarded or scarcely used to the benefit of the community. In the old centres of some cities, for example, the existence of abandoned or poorly maintained public spaces is frequent. Those spaces, destined to the exclusive use of automobiles, are of little use for activities that promote the meeting and the continuous appropriation of the population.

About the issue, Tenório (2012) works on the comprehension of the public space, dividing it in four moments: 1) in the industrial city; 2) in the conceptions of the garden-city; 3) in the modern movement; and 4) in the contemporaneous city. In the first case, the author mentions the public space in the pre-industrial and Industrial Revolution cities:

In the pre-industrial city, public space was a structuring element of urban areas and the place of necessary (economic, political, etc.) and optional (cultural, leisure, etc.) activities. The city of the Industrial Revolution maintained these characteristics, but exacerbated the destination of public space for the necessary activities, and it is described as normally occupied by a crowd of deplorable aspect (Tenório, 2012, p. 38).

The public spaces, in the conceptions of garden-city, developed by Ebenezer Howard (1850-1928), “are presented as a landscape of places. They are all, without exception, configured by buildings, which makes the public/private separation clear. Streets, boulevards and avenues are part of a connected network” (Tenório, 2012, p. 43). According to the author’s own critic, the apparent benefit to public life of a model of this type of configuration, runs into characteristics that have proven to be harmful to the public space, such as: “rigid separation of functions: institutions, commerce, housing, industries and recreation areas have its own place” (Tenório, 2012, p. 47), which result in burdensome displacements, emptying of areas at certain times and over-dimensioning of infrastructure; “transformation of the function of the street: with the functions previously established in specific places, the street becomes a place of passage rather than a destination”; “little variety of housing types” (Tenório, 2012, p. 48): undermines the necessary diversity and vitality of urban spaces.

In the modern movement, “streets and avenues are no longer organized in the form of a connected network and public spaces are not the structuring elements of the place (Tenório, 2012, p. 54). However, other city-garden ideas for public spaces are emphasized and “disseminated by the International Congresses of Modern Architecture/CIAM (1928-1959) in Europe, such as: the extreme separation of functions; public spaces created to house specific practices; complete transformation of the street function as a place of passage; low variety of ways of living; and recreation occurs between walls and turves are destined for free time” (Tenório, 2012, pp. 55-57).

The last item refers to public spaces in the contemporary city. At this moment, the ideas begin to be directed to the configurations opposed to those generated by the principles of garden-city and modern urbanism, which have proved to be damaging to public life. Tenório (2012) mentions important references to the subject such as: Jane Jacobs, Jan Gehl, Christopher Alexander, William Whyte, Bill Hillier, Julienne Hanson and Frederico de Holanda. The authors share the concern to direct the public spaces essentially to people and Tenório summarizes the ideas of these experts well in the following passage:

The so-called specialists of configuration and urbanity comprise, some to a greater extent, others to a lesser extent: the relationship configuration/social expectations, considering architecture as an independent variable; the need to keep distant from the discourses of intention and to use observation as a starting point to know the true functioning of people in public spaces; the importance of designing the city for the human being; and that the public space should be the stage for necessary and optional activities, which should be led by different people and happen continuously over time (Tenório, 2012, p. 61).

Discussions around ideas of this nature have brought interventions in public spaces aimed at people's well-being and urban vitality. In particular, the changes that have taken place in city centres with this focus have played and continue to play a key role in its maintenance (Arrais, 2015).

Holanda (2014) defines the vitality of the centres as the presence of the mixture of circulation and activities, in space and time. In addition, it points to the necessary presence of urbanity, which allows people to meet and reduces dodging. Finally, he ponders that when the centre becomes popular, in fact it does not lose its vitality, but it changes audiences. That is, even when there is a change of social class that starts to use the centre, as a result of urban dynamics, it is still possible to have vitality in these areas if there are incentives for this to happen. The centre often ceases to be principal from an economic point of view and takes on a secondary or sub-centre role, but this change in its importance in the urban system does not mean that its vitality has been reduced.

As for the vitality of public spaces, Tenório (2012) makes the following assumptions: 1) architectural characteristics of the open spaces for collective use of the city correlate with their vitality, in terms of high, varied, continuous presence of people and activities; 2) the city is healthier to the extent of the intense use of central public spaces by people who remain in them or flank through them, not only crossing them towards specific targets inside buildings (Tenório, 2012 *apud* Holanda, 2013, p. 125).

Many studies confirm the influence of the spatial configuration, represented by the relation of the full and empty elements that structure the urban network, in the movement of people in the spaces of the city (Hillier & Hanson, 1984; Holanda, 2002; Arrais, 2015). Thus, these researches are extremely relevant to this work when it is considered that the presence of people in public spaces is related to their vitality. However, the Holanda (2013) emphasizes that the pattern of the urban fabric is not enough to guarantee life in public spaces, because mechanisms are also necessary to stimulate and maintain the continuous movement of people, in space and time.

Based on these premises, the article explores the perspective through Jan Gehl's and Frederico de Holanda's approaches, exemplifying with mechanisms of vitality present in Brasilia, Copenhagen, Paris and London, cities that are traditionally quoted by urban planners and specialists on the subject.

For the organization of information, the article was divided into the following parts: 1) The first part introduces the theme and addresses some definitions of public spaces and urban vitality, particularly in city centres; 2) The second presents the methodology used. 3) And the last part discusses and exposes the findings of the study.

2. Methodology

The research was based on the analysis of the main mechanisms of vitality applied to public spaces exposed by two reference urban planners in the theme, Jan Gehl and Frederico de Holanda. To this end, the following methodological stages were carried out:

- Study on the researchers who discusses life in public spaces. In this item, the main names cited by Tenório (2012) were used as support;
- choice of two names indicated by Tenório (2012) to discuss and illustrate the approaches explored by them, especially those related to public spaces in central areas. To this end, it

- was considered the importance of urban planners as a reference in the addressed theme and the way they detail the strategies they suggest to apply in urban space;
- choice of cities that would illustrate the mechanisms pointed out by experts. The settlements were selected by considering their relevance in the studies on urban life;
 - analysis of the approaches and detailing of the vitality strategies through the illustration of the examples listed. The photos result from the observation made *in loco*;
 - discussion of the findings, which anticipates the conclusions.

3. Analysis/Results

This item explores the strategies that favor vitality in public spaces according to the specialists of the theme cited by Tenório (2012). For the author, Jane Jacobs, Jan Gehl, Christopher Alexander, William Whyte, Bill Hillier, Julienne Hanson and Frederico de Holanda suggest important points in common to provide life in public places. The main of them considers that public spaces need people in quantity and diversity to ensure their vitality, either circulating or remaining in them.

Regarding the spatial configuration, considering the urban system as a whole, researchers affirm that places of public use need to be established in areas: with diverse uses and functions, combined uses and without concentration of functions, and with integration of means of transportation. (Tenorio, 2012)

At the local level there are several elements pointed out by the authors and cited by Tenório (2012) and that should be present in the public space to provide their vitality, such as: buildings of different types and features; more doors and windows that open to the streets; spatial configuration that favours the passage to other places and at ground level; clear limits and dimensions consistent with their characteristics; accessibility by public and non-motorized transportation; accessible for pedestrians; limits with housing and various activities that work in different periods and outside of business hours; support for the performance of various activities, day and night; thermal, lighting, sound comfort and quality of air. The existing mechanisms should have low implementation and maintenance costs; and the space should have clear aspects, such as identity and orientation, symbolism, awakening positive affections, being beautiful and well cared for. (Tenorio, 2018)

From the cited authors, particularly Gehl (2013) and Holanda (2012) are of special relevance for detailing the strategies that ensure vitality in public spaces. For this reason, this study focuses on the approaches of these two researchers.

For Gehl (2013), the first fact to be considered in the city concerns the human dimension, referring to the scale of pedestrians. Urban planning, especially focused on modernist ideologies, prioritized models and interventions aimed at car traffic, and did little to think about “public space, pedestrian areas and the role of urban space as a meeting place for city residents (Gehl, 2013, p. 3).

The scales of the great centers, with their monumental dimensions and designed to highlight emblematic buildings and not to benefit the pedestrian, were models reproduced in the twentieth century. Cities with their large-scale buildings, huge voids and wide streets for car circulation (Figure 1) were examples of increasingly recurrent urban planning. For Gehl (2013), The “Brasilia syndrome” became an expression to refer to the city as a symbol of modernist urbanism and as distant from planning on behalf of people.

With regard to the Brazilian capital, Holanda (2013) discusses the difficulties that pedestrians have to travel in Brasília due to a highly dispersed urban layout, with large urban voids and that prioritizes the circulation of vehicles. In Plano Piloto, this problem is even more evident and the



Figure 1. *Monumental Axis in Brasília with a view of the TV Tower.*
Source: Arrais, 2015

discomfort for people walking is enormous, especially considering that in addition to the long distances to be covered, there is a lack of shaded areas and urban equipment that allow rest.

Gehl (2013) states that the urban space of Brasília is “too big and not welcoming at all (GEHL, 2013, p. 194)”. And he adds that, for people to feel invited to stay in places, it is necessary to insert some elements in the urban space. In this sense, Gehl suggests some necessary mechanisms for vitality in public spaces and that in some points are similar to the ideas disseminated by Holanda, such as:

3.1. *Places to sit*

Primary movable seats with backrests and arms (seats, chairs); and secondary seats (Figure 2), places where people can stand (pedestals, steps, stones, friars, monuments and the floor itself).

Gehl also alerts to the importance of thinking about the location, design and materials of these seats, especially in the case of urban furniture that should aim at the comfort of its user. At this point, it is interesting to discuss the urban equipment and furniture inserted in public spaces that certainly work as attractions for people and invite them to stay. In Copenhagen, at all times, whether on the street or in a square, it is possible to be surprised with creations (Figure 3) that impress by the simple solutions of design and idea, but which reflect care for the spaces and for whoever uses them.

3.2. *Transition spaces*

According to Gehl (2013), these are spaces that are not completely inside buildings and not completely outside them, such as: details of irregular façades; and commercial establishments with open-air care (Figure 4).

These spaces cited by Gehl allow greater visibility of buildings and according to Holanda (2013) is something fundamental for life in public spaces, because depending on how this resource is used, it may encourage the flow and the gathering of people, or on the contrary, cause dodges. The transition spaces or even facades on the ground floor (Figure 5) with doors that open to the streets provide greater flows of movement, because people tend to walk through buildings that maintain this relationship with the street, and prefer them over those where what is to be seen are blinded gables. Buildings with more visibility or more “eyes” and “faces”, terms used by Holanda, convey more security to passers-by than those who only have “shoulders” and “back”.

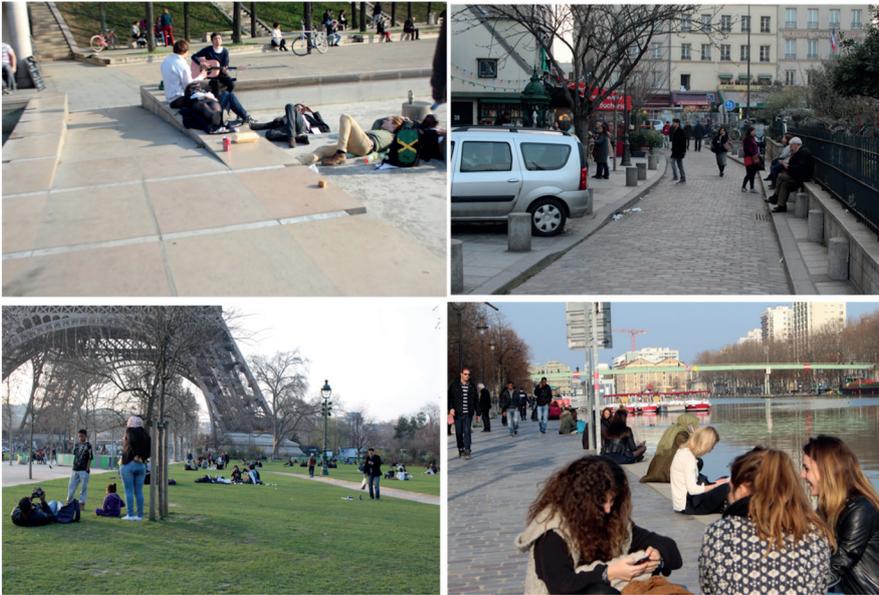


Figure 2. *Secondary seats in Paris.* Fonte: Arrais, 2015.



Figure 3. *Elements in the public spaces of Copenhagen.* Source: Arrais, 2015.



Figure 4. *Transitional spaces – cafe in Copenhagen with emphasis on heating mechanisms.* Source: Arrais, 2015.

While the openings – the doors – in buildings that lead directly to the street stimulate the movement of people and thus increase the flow of movement, the blind walls do the opposite and worse, create insecure and reduced spaces of vitality, which are likely to suffer degradation. For this reason, underpasses (Figure 6) – elements introduced into Brasília's urban space to separate pedestrian and vehicle circulation – are highly questionable.

3.3. Reorder and integrate

Traffic types: According to Gehl, the model of traffic type segregation – cars and pedestrians – used in the conception of Brasilia seems optimal, however, in reality, it does not work very well when the following is not taken into consideration: 1) people choose shorter routes; 2) it is necessary to be concerned with protection mechanisms, because this separation tends to create places with little movement and therefore also unsafe. A pedestrian-only street should have measures to ensure the continuous flow of movement, otherwise they become unsafe places that should be avoided.

Perhaps the most effective solution to ensure safe movement of vehicles and pedestrians while maintaining the vitality of cities through the continuous flow of movement of people is the segregation of traffic types at the same street level. This separation means exclusive lanes for vehicles and pedestrians, but does not mean lack of integration. In fact, it is very important for the proper



Figure 5. Ground floor facades that lead directly to the street in Copenhagen.
Source: Arrais, 2015.



Figure 6. In Brasília, underpasses through Eixão. Fonte: Arrais 2015.

functioning of the transportation system. Jan explains with the example of bicycles in Copenhagen (Figure 7).

The invitation to pedal implies that bicycle traffic is integrated into the overall transportation strategy. It is necessary to create conditions for taking bicycles on trains and subways, and preferably also on urban buses, so that it is possible to travel by combining bicycle and public transit. (...) Another important link in an integrated system is the possibility of parking bicycles safely at stations and terminals. (...) It is also necessary to have good parking options for bicycles along the streets in general (Gehl, 2013, p. 185).

Every year the number of cyclists in the Danish capital is growing, reflecting public policies aimed at reducing the number of cars on the streets and the use of less polluting means of transportation. To achieve this, the public authorities create better and safer conditions for those who ride bicycles. There is an adequate and effective system that supports bicycle paths.

According to Gehl (2013), Copenhagen suffered major problems with car traffic and was one of the first European cities to seek solutions to the problem in the 1960s, beginning to reduce the circulation of cars and parking lots in the city center. The author cites the case of Strøget Street (Figure 8), a traditional Copenhagen street that was transformed into a pedestrian promenade in 1962. Despite many criticisms, the project was implemented and the increase in the number of pedestrians on the site soon became evident. Gehl (2013) also adds that barriers that restrict vehicle traffic, parking fees and reduced speed on the streets discourage car circulation and, combined with measures of accessibility on the streets, favor the displacement of people, especially those with special needs (elderly, wheelchair users, baby strollers, among others).

3.4. Road Accessibility

In cities where urban planning is focused on people, one of the most relevant aspects to observe is the care with accessibility for all, especially for those who have some kind of physical restriction, such as the elderly and wheelchair users. Gehl (2013) shows some solutions that are to some extent simple and that favor pedestrians on the streets, such as: a) widening the sidewalks and free of obstacles; b) using specific signs in pedestrian lanes, carefully designed to provide tranquility and safety for people to walk (Figure 9); c) avoiding the use of fences, islands, which interrupt the continuous traffic flow and prioritise the crossings directly at street level over the use underpassed ones.



Figure 7. Integrated system in Copenhagen. Source: Arrais, 2015.

Holanda's (2013) approach to road accessibility converges with the topics addressed by Gehl and adds the observation of road layout as an essential element, also for providing accessibility and ensuring the flow of people's movement. The author states that an urban network configuration where people have to make countless inflections, to reach certain destinations, has little accessibility. A clear example is the residential superblocs in Plano Piloto in Brasilia: the amount of inflections or corners to be crossed results in a considerable degree of labyrinthineism.



Figure 8. *StrØget Street transformed into a boardwalk.* Source: Arrais, 2015.



Figure 9. *Carefully thought out specific pedestrian crossing signs in London.* Source: Arrais, 2015.

3.5. Mixture of Uses and Activities

For Gehl (2013) one of the aspects of extreme relevance for urban planning refers to the way functions are organized in the city. For the urban planner, it is necessary to distribute the functions in order to ensure shorter displacements, and integrate them to allow versatility, social sustainability and safety. Once again, he criticizes the models of cities that are divided into specific zones for each use, i.e that is, cities which are compartmentalized into residential, commercial and service zones, similar to that of Brasilia.

When Jan discusses the importance of integrating urban functions to ensure that the city is sustainable, versatile, and alive, it is nothing more than enabling the uses to be found in the various parts of the urban structure. In the central areas it is essential to mix residential and commercial uses in the same area (Figure 10), allowing that even when there is no movement in business hours, there is the presence of residents continuously, including at different times of the day. The urban planner mentions the case of the centre of Copenhagen: “seven thousand people live in the central area of Copenhagen and, in winter, during the night of a normal week-day, about seven thousand illuminated windows are visible on the streets (Gehl, 2013, p. 98)”.

When it comes to bringing cities to life, Holanda (2002) considers the separation of uses and activities as a big mistake, as it happens in Brasilia and in some settlements, where urban planning is based on modern, segregated urbanism, with specific zones for each urban function and with large gaps that highlight buildings and do not favour people. The author believes that the extreme separation of uses is one of the factors that trigger the degradation of some central areas.

4. Discussion/Conclusion

The article explored the approach developed by Jan Gehl and Frederico de Holanda that describes the mechanisms needed to generate and guarantee the vitality of public spaces. In summary, for Jan Gehl, the aspects to be considered are: 1) the pedestrian scale should be prioritized; 2) the spaces should be inviting and elements should be implemented (urban furniture, reordering and integrating traffic, providing accessibility for all, encouraging the mixture of uses and activities, favoring safety, among others) that reinforce the permanence in these places.



Figure 10. *Busy streets in the centre of Paris with mixed uses.* Source: Arrais, 2015.

In the strategies developed by Frederico de Holanda, which are similar in some points of the mechanisms cited by Gehl, three essential factors for urban vitality are discussed: 1) the accessibility of roads: avoiding barriers, levels and obstacles that prevent pedestrians and cyclists from circulating; 2) the mixture of activities: with the integration of functions and activities in different parts of town, avoiding the extreme separation of uses; 3) the visibility of buildings: this means that buildings should have more openings that lead to streets and less blind gables.

The mechanisms described by both are essential elements to ensure the continuous flow of movement of people in urban space, at differing times of the day, and are therefore key strategies when the goal is vitality, especially of the centers. Despite presenting themselves as instruments that are applied at the local level, they end up producing positive implications for the whole system, since the actions are also integrated and reverberate in other parts of the city.

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