*Research Paper*

# BETTER PLACES FOR A LIVABLE – AND LIVELY – CITY

A method of Post-Occupancy Evaluation of public spaces

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## Abstract

*Public spaces that attract and retain diverse people are crucial to foster urbanity and tolerance, and build stronger and livelier communities, especially in big cities. The simple coexistence of similarities and differences in public spaces can, to say the least, validate our own essence and offer us a possibility of growth. Sharing the same space with other people – even without interacting with them – favors social learning. Theory suggests that thought, feeling and behavior can be altered by observation. The search for public spaces that make urbanity viable is desirable in any society (especially in more unequal societies, as one can find in developing countries). However, inspired by ideas built on the critique of great urban agglomerations after the Industrial Revolution, cities around the world have undergone transformations that did exactly the opposite. As a series of lifeless places began to emerge, several researchers tried to figure out why this was happening. These researchers found that just wanting to create a lively place was not enough. It was necessary to scrutinize the behavior of people in public spaces in order to understand the relationship between their configuration and use. The knowledge they have built has been largely responsible for the increasing concern with public spaces and their relation to public life since the 1960s. Cities around the world are realizing that empty places could be full of people, and that not only a place full of people is something positive, but an empty place is not. They are learning to see underused public spaces as social, cultural, environmental, and financial waste. However, even with so much information available, it is still possible to find, in any contemporary city, public spaces that fail to support public life. Frequently, little or nothing is done to make them safer or more attractive, diverse and pleasant. It is even more worrying to realize that such places continue to be created. This is the focus of this paper. It brings together available knowledge and experiences in the area of public space design. It also complements, structures and translates such experiences and knowledge into a Public Space Post-Occupancy Evaluation Method, which stresses the importance of observing people and their activities. As a result, one can better understand, observe, assess and, thus, manipulate the main attributes of a public space that may influence its capacity to attract and retain diverse people on a daily basis. The method is offered as a tool to support those who deal with public spaces at different levels – from academic studies to municipal management. It has been used in Brasilia, Brazil, for the past 7 years, with positive results in governmental decision-making processes. A case study is briefly presented to illustrate its use.*

## Keywords

## 1. Introduction

As a concept, livability – just like quality of life – can be controversial in terms of its meaning from the point of view of individuals. According to Ruth & Franklin (2013), urban life expectations may vary according to several factors, such as the stage of life people are in, or their preference for using individual transportation. However, in the context of city planning it is important to acknowledge that our attempt to distribute urban onuses and bonuses in a fair manner among the entire population – without undue privileges – leads us toward considering the collective good, focusing on points in common, rather than individual or group preferences and desires.

As urban components, public spaces are capable of favoring collectivity. When addressing the concept of livability, Jacobs & Appleyard (1988), Young & Hermanson (2012) and Herrman & Lewis (2017), among others, often consider public spaces as streets or parks (and less so in the form of squares). There is a clear concern with securing a good mix and distribution of housing and other activities, so as to create walkable areas and favor public and non-motorized transport, and thus avoid road traffic and pollution. In addition, from the perspective of preventive medicine and promotion of physical well-being, parks and walking/recreation areas are an important tool against health conditions caused or aggravated by urban life, such as obesity, heart and respiratory problems, etc. The terms "community" and "neighborhood" are widely used in the context of public spaces. Coexistence and social interaction, on the other hand, are not as common, since they can also take place in enclosed spaces, such as gyms or community centers.

However, it is important to point out that public spaces are not only leisure and exercise areas, nor links between different urban activities: they connect human beings, as they offer us an opportunity to see other people (co-science) and share the same space with them (co-presence). They are not only a means for us to meet individual needs, but rather a tool that enables us to perceive ourselves as part of a whole. Public spaces welcome and reveal differences, while allowing us to choose between isolation and interaction. It is in them that individuals find collective life, and are able to exercise their urbanity.

The dictionary definition of urbanity points us towards important social values: "Courteousness and refinement of manner" (Lexico, 2019). According to Holanda (2002), it represents one of "democracy's dearest universal values." It is present in the exercise of tolerance, in the negotiation of interests, in empathy, collaboration, and participation in temporal life. As a concept, urbanity includes the idea of face-to-face interactions, which can only take place among individuals who share the same space. Yet, for this to happen, such spaces must be able to attract and retain individuals.

The search for urbanity – and for public spaces that make it viable – is established as something desirable in any society. However, inspired by ideas built on criticism of how post-Industrial Revolution cities led to great human agglomerations, many cities around the world underwent transformations that gave rise to a number of lifeless areas – despite their early claims that such places were meant to be used by people. Several scholars, then, began to try to understand why this was happening, and found that the mere intention to create a living space was not enough. It was necessary to conduct an unbiased observation of people's behavior in such places so as to understand the relationship between their

configuration and use. The knowledge built by them was largely responsible for the increased concern with public spaces that favor urbanity observed since the 1960s.

However, even with so much information available, it is still possible to find lifeless public spaces in cities. In many of them, little or nothing is done to make them more attractive, safe, adequate, diverse, or pleasant to the population. The worst of all is that such places are still being created! It is in this context that a method has been developed to help change this reality. It helps us to understand, learn how to observe, evaluate and, consequently, manipulate the main attributes of a public space that may impact on a place's ability to favor co-presence, so that our cities may be not only livable, but also lively.

## 2. The method

The method was first presented by Tenorio (2012) in her doctoral dissertation. Since then, it has been improved, building on reflections arising from its application in practical activities developed at the Faculty of Architecture and Urbanism of the University of Brasília (Tenorio, 2014); collaborative actions performed with the Government of the Federal District to improve the central areas of Brasilia (Tenorio & Kronenberger, 2017); and MA theses that focused on the topic of public spaces (Menezes & Reis, 2015; Cardoso, 2019).

The work is based on the Space Syntax Theory, as it highlights the inextricable relationship between the form of human settlements and the society that produces, uses and reproduces them. According to this theory, "Spatial order is one of the most striking means by which we recognize the existence of cultural differences between one social formation and another, that is, differences in the ways in which members of those societies live out and reproduce their social existence." (Hillier & Hanson, 2003)

Form attributes harmonize with social expectations that are based on peoples' cultural patterns, from which Holanda (2011) draws two major socio-spatial paradigms: formality and urbanity. While the first considers cities according to spatial patterns that contemplate segregation, border control, high hierarchy, and separate functions, the other favors integration, elimination of borders, proximity, low hierarchy, and diversity of uses. The paradigm of urbanity has been the foundation for our knowledge about public spaces.

With these expectations in mind, the method brought together available knowledge and experiences on the design of public spaces, and translated, complemented and structured them. It built on research developed by the following authors: Jane Jacobs (1961); Jan Gehl (2006, 2010); Jan Gehl & Lars Gemzo (1996); Christopher Alexander et al., (1977); William Whyte (1980); Bill Hillier & Julienne Hanson (1984); Allan Jacobs & Donald Appleyard (1987); Frederico de Holanda (2011); Project for Public Spaces (2005) and (2008); and Congress for the New Urbanism (1993). The parameters found in the evaluation part of the method come from this literature review.

The method includes 5 steps: 1) knowledge of the place; 2) public life survey; 3) public life evaluation; 4) public space evaluation; and 5) recommendations.

### 2.1.  Knowledge of the place

The method starts with selecting and visiting the place to learn about it, or to see it with different eyes (if you already know it). Researchers should try to access it in different ways, on different days and times, to walk, explore, experience and register it. These field trips will

also allow researchers to produce or update a detailed plan of the place and its borders, as well as define survey spots for the next stage. In addition, it is essential to know the area of the city where it is located, to study it in its urban context with the support of texts, maps, drawings, aerial photos, statistical data, legislation, etc.

## 2.2.    Public life survey

This step presupposes systematic field trips to perform pedestrian flow counts and a survey of stationary activities. The greatest benefit of going to the field is the fact that researchers can remain on site for enough time to absorb the dynamics of how the place is used. We are interested in finding out who is doing what, where and with whom. The procedures suggested by Gehl & Svarre (2013) and by Project for Public Spaces (2005) are applied at this stage. Pedestrian flow counting spots are selected, from where passers-by are counted, usually in 10-minute slots. The results are subsequently multiplied by 6 to obtain an hourly average. For stationary activities, which will later be transformed into behavioral maps, records are taken every two hours at a fixed spot. Informal interviews, photographs, questionnaires, and other techniques (such as image research) may and should be incorporated into this step. The collected data are then processed and presented as charts.

## 2.3.    Public life evaluation

This step is based on checklists linked to subjects and activities. All these items are used to create a spreadsheet to be filled after the field trips.

For subject evaluation, a key requirement is for the place to have people – diverse people, all the time, and every day (i.e., excluding previously scheduled events, parties, demonstrations, etc.). Thus, the evaluation items are:

1.  **People**. Although this may seem obvious, it reminds us of how important it is to focus on people, not on the place. A place may be considered beautiful, but if it is always empty, it is considered inefficient as a support for public life, and would therefore not do well under this criterion.

2.  **Diverse people**. The place should allow for the co-presence of diverse people, in terms of gender, generation, race, ethnicity, etc. This diversity should reflect the society where the place is inserted, and include local residents. The existence of diverse people should contemplate individuals as well as couples and groups. Researchers should observe whether they can identify any prevailing groups, and whether such groups might inhibit the presence of other groups or individuals. An important point highlighted in the literature is the strong presence of women. In public spaces, women are more vulnerable and more subject to unwanted approaches, and therefore they tend to be more selective about where to linger. A gender-imbalanced location is considered problematic.

3.  **People, all the time.** The selected place should have people most of the time and throughout the week, and their presence should be evenly distributed. If the place is crowded only during lunchtime on weekdays, it probably has some issues. This assessment should consider aspects related to the place and its people, such as climate and culture, which might influence the daily life and the use of public spaces.

    There are some public spaces that do not attract people every day. However, when they do, they receive a number of people that hardly any other place in the city might contain. They are usually very large, and are meant for symbolic rather than temporal

use. Such symbolic places are important, though they carry the burden of being empty most of the time.

Regarding **activities**, public spaces should have:

4. **People passing by.** Passing by is a very common activity in any public space. The expected number of people will depend on the characteristics of each place. Some public spaces are central, close to activities that attract the public, and therefore one might expect to find a large number of passers-by. On the other hand, some spaces are more local, and the daily flow of people is less significant.

5. **People lingering.** Whether they were passing by and decided to stop, or they meant to go to that public space to stay there, the presence of people lingering at one place is evidence that such place offers reasons for that choice. There is no set parameter to establish an optimal lingering time: it can be influenced by various factors, including climate, for example. But in fact, the more people linger at one place, the more successful it can be considered as a public space.

6. **People meeting, either voluntarily or by chance.** Public spaces should enable random encounters involving people that know each other and also complete strangers, as this is the very basis of urbanity. However, they should also provide a place for people to arrange meetings with friends, acquaintances or strangers, with a clear indication that they chose to do that.

7. **People keeping and watching the place, either formally or informally**. Public spaces require people to maintain them, either formally or informally. The same can be said of those responsible for their surveillance. Informal surveillance – Jane Jacobs's "eyes on the street" – is always welcome.

8. **People performing various activities.** The more diverse and simultaneous activities are identified, the better the place will perform as a support for public life. Such activities may: (a) take place within a public space, through the support of its constituent elements (people playing on a sports court, children climbing trees, young people talking in the shade); (b) take place near its borders, whether they stay there (in shops or cafés) or move towards the public space (someone buying an ice cream near the border and eating it on a bench in a square); and (c) be motivated by the presence of people in the place (people distributing fliers, street vendors, street musicians). If, in addition to their daily use, the spaces still host, sporadically or frequently, scheduled activities, this means that they are managed well and are valued by the community. These activities may be passive or active.

## 2.4.   Public space evaluation

After getting a picture of public life in your space, it will be possible to determine whether it favors it, and to what extent. It will also be possible to tell if such life is consistent with the place's characteristics and its role in the city. For this assessment, one should bear in mind that there may always be more people in the place, that they can always be more diverse, and that they can always perform more activities, for longer, in a better way.

If a place is successful in public life, it is important to understand why, so as to use it as part of your repertoire, or as an example of good practice (it is also interesting to find out if there is anything else that can be done to make it even better). If it is not successful, it is important

to understand the reasons for its poor performance. Thus, the evaluation of public life does not dispense with the evaluation of how that specific public space is configured.

Several authors focus their studies only on the physical characteristics of the **place** (flooring, furniture, shading) and fail to observe the elements that define it, that is, its **interface** (surrounding buildings and their public/private relationship, their doors and windows, the activities they offer), as well as the wider **context** of the area (location in the city, zoning, accessibility, population density). Often the main reasons for a place's limited use are not linked to its local attributes, but rather to its location away from the main flows of people, or their belonging to a monofunctional zone.

For this step, we use two spreadsheets with the same characteristics of the previous ones to deal with public space configuration elements: global attributes, or **urban context;** and local attributes, i.e., **interface** and **place**.

Regarding global attributes – **urban context –** one must analyze the configuration of the area in the city where the place is. In general, in order to favor the presence of people:

9.  **Areas should be compact.** Their open space/total area ratio should not be very high. They cannot have idle and residual areas, and their buildings should occupy the ground efficiently, thus increasing the use of infrastructure and favoring the implementation of public transportation.

10. **Areas should be integrated.** The presence of the following elements should be minimal: cul-de-sacs, places with few access points, and very large blocks. With more connections, route alternatives are expanded, which not only promotes a better distribution of activities and people through the urban fabric, but also favors the implementation of public transportation systems and decreases travel times.

11. **Areas should provide a mix of diverse uses.** Except for very specific situations involving health and safety issues or risks, they should offer a variety of activities. They should be well distributed, be complementary, and function beyond business hours.

12. **Areas should offer different types of housing – well distributed and with a certain degree of density**. Housing should be one of their main uses. The areas should envisage different types of housing so as to accommodate diverse people. This avoids the development of zones with very homogeneous population, which would result in low diversity levels in public spaces. The density may vary within the area, which also favors diversity, but cannot be very low.

13. **Areas should favor the mobility of pedestrians, cyclists and public transportation, rather than cars.** Using private cars on a daily basis should be a less enticing option than other means of transportation. Parking spaces should be limited, and should not be free. These areas should be able to offer an integrated public transport system and a cycling system. Walking, cycling and using public transportation should be easy and enjoyable experiences.

Regarding local attributes (**interface and place**):

14. **Places should act as passages to other places**. They should be favorably located in relation to their area in the city, and preferably be connected to other places. This would favor the constant flow of passers-by.

15. **Places should have clear boundaries, and their size should be consistent with their characteristics**. Interfaces should be clear, as well as the distinction between public and private. The size of the place should be proportionate to its role in the urban context.

16. **Buildings should be of different types and present different characteristics** so as to accommodate diverse people and activities.

18. **The boundaries of the place should have many doors and windows opening towards it.** There should be no blind spots (out of sight for doors or windows). The boundaries should have "eyes on the street" (Jacobs, 2007), which provides informal vigilance and, consequently, a sense of security.

19. **Places should be at ground level** (Whyte, 1980), in line with the natural relief. This allows greater accessibility to the whole area and favors the visualization of its activities from surrounding private spaces.

20. **Places should be accessible by public and non-motorized transport, and should offer pedestrians good access and circulation options**. The connections between places and their boundaries should prioritize pedestrians, be frequent, open, safe and at ground level, and avoid underground passages or elevated walkways. These places should present no obstacles to pedestrian circulation, and should be accessible.

21. **Interfaces between places and their surrounding areas should support diverse activities.** It is essential to have a mix of housing and activities that run day and night, such as establishments that sell food – bars, restaurants, outdoor cafes, etc.

22. **Public spaces should contain places and elements that enable diverse activities, so that they can be seen as a destination.** They should be passive and active, available on weekdays and weekends, and appeal to a variety of people. Places should adequately support the activities identified in the public life survey.

23. **Places should be pleasant and comfortable in terms of temperature, light, sound and air quality** (including odors). They should be well lit at night.

24. **Building and maintenance costs should be compatible with governmental reality**.

25. **Places should have their own identity, and act as an element that favors the orientation of people in the surrounding area and within the place itself.**

26. **Places should have elements that symbolize their history, population and characteristics and, ideally, they should be a symbol of their surrounding area, including elements that make them memorable.**

27. **Places should avoid causing negative affects and should provide a sense of security, so that pedestrians can feel that they control the place, and that someone is watching over them**. In addition, they should make everyone feel that they also belong there, that they are entitled to be there, and to do something positive for them.

28. **Places and their components should be beautiful and well cared for.**

## 2.5.    Recommendations

After assessing the elements of public space configuration, one should try to understand their relationship with the public life observed there, so as to identify correspondences and discrepancies, and eventually conclude whether or not there is a need for intervention. A summary of the tables will point out any negative and positive aspects.

If a public space is assessed as good, one should consider how to make it even better. If not, it will be necessary to study the variables that performed poorly, and consider how to reverse this. The interventions that will be recommended as a result of the study can be listed from the simplest, cheapest and/or shorter term (which can even be applied on an experimental basis) to the most complex, expensive and/or longer term.

In general, not all variables can be manipulated. In some cases, it is not desirable that they should be, since this would mean disregarding what such public space represents. Having clarity on the place's role in the city is therefore the first step towards filtering the variables that should be manipulated, the degree of manipulation to which they can be subjected, or what agents may be involved in their transformation process.

This is consistent with the guidance we find in PPS (2005) on the need to develop a collectively built vision for the public space under scrutiny. That is why one cannot interfere in a public space without considering the people that have a direct link with it: who they are, what they think and how they act.

## 3.  Method application

A brief case study seeks to exemplify the post-occupation evaluation of public spaces in Brasilia's Bus Station Platform, located in the heart of the city. It is a UNESCO World Heritage Site of modernist DNA and a design based on the paradigm of formality. In other words, it has negative characteristics for public daily life. Below the platform we will find Brasilia's urban bus terminal and its central subway station (figure 1).



**Figure 1. City Center, Brasilia, Brazil. In the foreground, the Bus Station Platform, with clear spaces for private cars, and its two squares, one on the left and the other on the right. In the background, we can see the Esplanade of Ministries. Photo by Joana França.**

In order to gain knowledge on the place, we analyzed the documents that originated the city layout, data on urban and metropolitan contexts, and cultural heritage legislation. We also carried out an image survey, which relied on mental maps made by interviewees. The public life survey was done on a Tuesday and a Saturday. The flow count took into account the access points to the area, as well as internal flows originating from the bus station. There is a significant presence of street vendors. The data collected in steps 1 and 2 are shown in figure 2.
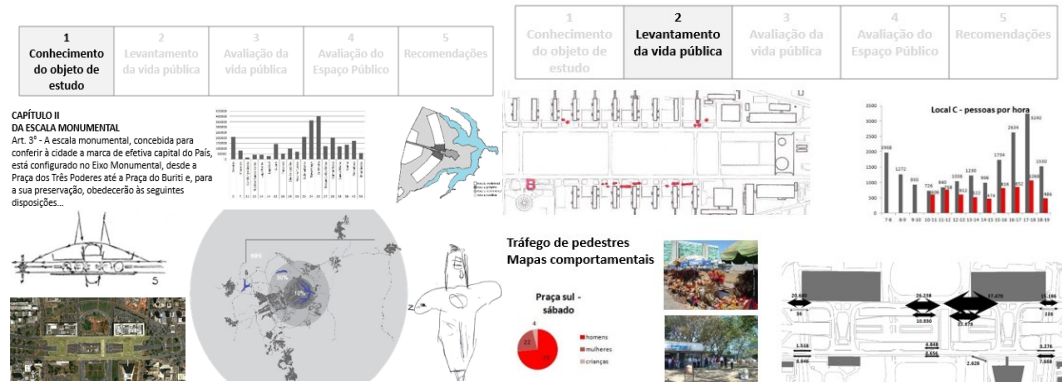
**Figure 2 Step 1 (Knowledge of the Place), and Step 2 (Public Life Survey)**

The public life evaluation identified an intense flow of passers-by, together with a very low number of people lingering in the squares, with strong male presence (uneven population). The diversity of activities performed by the subjects were considered poor: the place is just a passageway. The public space evaluation shows that it scores high in terms of location, symbolism, identity and beauty. Its results were poor for the vast majority of global attributes (rigid separation of functions, absence of housing, mobility favoring individual transportation); and particularly poor for local attributes, such as comfort and the offer of support equipment for different activities (figure 3).



**Figure 3 Step 3 (Public Life Evaluation), and Step 4 (Public Space Evaluation). The tables summarize the assessment. The results range from red (very bad), orange (bad), yellow (reasonable), light green (good) and dark green (very good). This image represents just the conclusive summary; each of the assessed categories must be justified according to the data collected, supported by the literature and illustrated with images or graphs.**

Our recommended vision for the Bus Station Platform is that it should fulfill its role as the most privileged point in the city, revealing elements that are meaningful for the population and which, therefore, should be appreciated at leisure. It should assume its role as a key element in the city center, favoring the connection to other neighboring sectors. It should be the core of urban life and a comfortable, safe, diverse place, widely used on several days and times, favoring pedestrians and public transportation users.

Based on this assessment, with no prejudice to the attributes of a World Heritage Site, we recommend minor interventions that do not interfere in the macro structure of the landscape, but that make a great difference for pedestrians: adjusting the road traffic system; reducing the area meant for cars; offering priority, safety and comfort to passers-by; providing shading on routes and squares; enhancing the place with street furniture; organizing the presence and activity of street vendors; and revisiting original ideas from the time when Brasilia was created, such as back-lit advertising panels.

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## 4.  Final considerations

Our method seeks to show that we can learn more about the places we are studying. Interventions need to be informed, context-appropriate and effective if they want to fulfill their purpose of attracting more people to public spaces, and keeping them there. It highlights features that can eventually be developed, according to their need or feasibility, within the field of knowledge of each of the items present in it. It favors breadth rather than depth – two potential research strands.

So far, its application has shown that it can be useful for its intended purpose, including corrections, adaptations and extensions. Evidence of potential benefits and problems in existing places helps us to create new public spaces that do not reproduce unfavorable realities for social appropriation, and that can be useful to the community in the construction of a living and livable city.

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