

Reading attributes of the urban space: a possible methodology for urban heritage

Lendo atributos do espaço urbano:
uma metodologia possível para o patrimônio urbano

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Abstract

This article proposes the possibility of reading urban space through the methodology presented by Ewing and Clement (2013) in the book *Measuring Urban Design*. This methodology was applied to a section of the central area of the city of Laguna, State of Santa Catarina, an area listed by the National Institute of Historical and Artistic Heritage in the 1980s due to its historical and cultural relevance. The methodology determines which public spaces in a city are more attractive to human presence compared to others and what the perceptible qualities of these spaces are, as well as how these qualities can be measured. Initial results indicate that the proposed methodology is suitable for identifying and measuring the perceptible qualities of the urban environment, both in urban heritage areas and in other areas.

Keywords: urban space; public space; historic center; urban quality; perception.

Resumo

*Este artigo propõe uma possibilidade de leitura do espaço urbano por meio da metodologia apresentada por Ewing e Clement (2013) no livro *Measuring urban design*. Essa metodologia foi aplicada em um trecho da área central da cidade de Laguna/SC tombada pelo Instituto de Patrimônio Histórico e Artístico Nacional nos anos 1980, por sua relevância histórica e cultural, o que determina quais espaços públicos de uma cidade são mais atrativos à presença humana em detrimento de outros, quais são as qualidades perceptíveis desse espaço e como essas qualidades podem ser mensuradas. Os resultados iniciais indicam que a metodologia proposta é adequada para identificar e mensurar as qualidades perceptíveis do ambiente urbano, tanto em áreas urbanas patrimoniais quanto nas demais áreas.*

Palavras-chave: espaço urbano; espaço público; centro histórico; qualidade urbana; percepção.



Introduction

The urban space of a city is constituted by the relationships between its built-up areas and its open spaces, but above all by the way in which city dwellers interact with them. Urban space is the result of social interactions, of the people who use and experience it. According to Habermas (2003), public space resides in the public sphere and is a suitable network for the formation of positions and opinions.

Thus, we can consider that its form and configuration may or may not stimulate the use of different possible relationships. But what are the characteristics, or even urban qualities, that a space needs to have to be attractive to users? What determines which public spaces in a city are more attractive to human presence than others? What are the perceptible qualities of urban space? And, most importantly, how can these qualities be measured? This article proposes a possibility of reading urban space through the methodology presented by Ewing and Clement (2013) in the book *Measuring Urban Design*.

A city's public spaces have their own individual characteristics and can reveal the character of a city. When we experience these spaces, we also experience the city and its unique features. When we talk about a city with a heritage character, this intrinsic value becomes even more relevant, and urban public spaces – streets, sidewalks, squares and parks – carry with them not only social value, but also historical and cultural value. Therefore, the neighborhood of Centro in the city of Laguna, on the southern coast of Santa Catarina, was chosen to apply this methodology.¹

The methodology

The methodology presented here is based on interdisciplinary research whose main objective was to measure the qualities and elements of urban design that provide attractive circulation areas for pedestrians, such as street furniture, vegetation, color and shape of facades, among others, always from the user's scale.

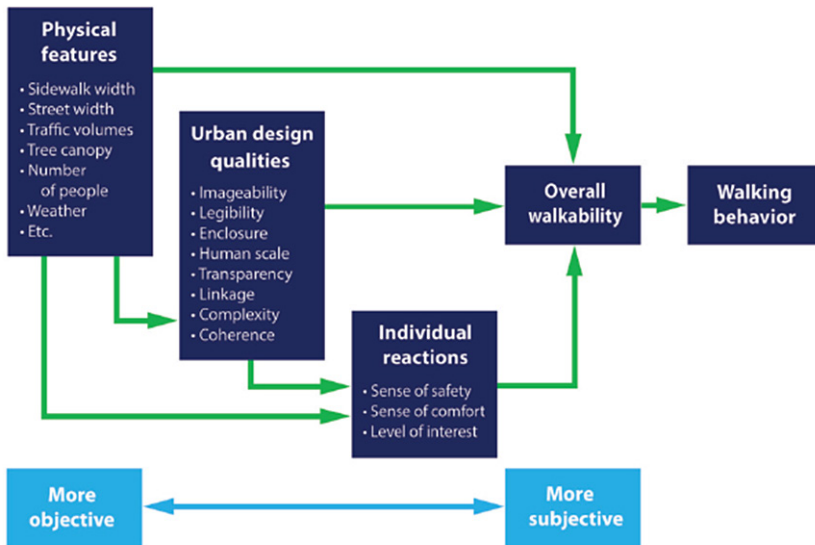
This analysis focused mainly on urban roads and pedestrians, considering that, in terms of public domain, no element is more important than the streets: we use them to go to work, shop, exercise and carry out our daily activities.

Parks, squares, trails and other public places also play an important role in everyday tasks, but, considering the critical and omnipresent role of streets, this methodology sought to identify the attributes that make one street more inviting and passable than another.

The measures used in previous studies to characterize the built environment have mostly been general qualities, such as neighborhood density and street connectivity. What do these measures tell us about what it is like to walk down a street? The answer is not much, which is why measuring urban design qualities is so important. (Ewing and Clement, 2013, p. 99)

The research group's proposal was to create a tool to measure the urban design qualities of public spaces – which were initially based on highly subjective definitions – for operational definitions that could capture the essence of each quality and be reliably measured among evaluators, including those without training around, urban design. First,

Figure 1 – Summary table of perceptible qualities in the urban environment



Source: author based on Ewing and Clement (2013) in 2018.

these definitions were identified, which were the most subjective and which were the least subjective (Figure 1).

The existing literature on urban design points to subtle qualities that can influence choices such as where we walk and how long we stay in those places. Referred to as perceptual qualities of the urban environment, or urban design qualities, it is assumed that such qualities intervene between physical characteristics and behavior, encouraging people to walk through certain places rather than others (ibid.).

However, testing this assumption requires reliable methods of measuring urban design qualities, allowing comparison of these qualities with user behavior. Different tools for measuring

environmental quality have emerged in recent years, and some are widely used in the United States in urban quality measurement research.

However, for Ewing and Clement (2013), the so-called qualities are more than just the individual physical characteristics that can make up the urban environment. Such characteristics have a cumulative effect that is greater than the sum of their parts.

Individual physical features may not tell us much about the experience of walking down a particular street, specifically because they do not capture people's overall perceptions of the street environment, perceptions that may have complex or subtle relationships with their physical features.

Qualities that are visually perceived, such as dimensions and colors, may differ from qualities such as feeling of comfort, feeling of safety, and level of interest, which reflect how an individual reacts to a place – how a person evaluates the given conditions based on his or her own attitudes and preferences.

Thus, according to the authors, “[...] perceptions are just that – perceptions” (ibid., p. 2). They can provoke different reactions in different people, at different times, and can be objectively evaluated by external observers; individual reactions, however, cannot. For Tuan (2012), even if our perceptions of the environment are diverse, we are members of the same species and are therefore limited to seeing things in a certain way.

During the initial development of the methodology, the main perceptive qualities of the urban environment were identified based on a review of the urban design literature that ranges from the most classical authors, such as Camillo Sitte, Kevin Lynch, Gordon Cullen and Jane Jacobs, to more contemporary authors in the study of the perception of urban space, such as Amos Rapoport and Jan Gehl.

Empirically, it was hypothesized that these qualities might influence people's decisions to walk rather than drive to a destination, to stroll in their leisure time, or to simply go out and socialize on a street. The literature on visual preference and evaluation, which attempted to measure how individuals perceive their environments and to better understand what individuals value in these environments, was also reviewed.

The theoretical basis that underpins the methodology went beyond the literature and the limits of the theoretical field of urban design and architecture and urbanism, entering the field of environmental psychology, in which the perceptive qualities of the environment figure prominently in several studies (ibid.).

The attributes

The researchers came up with a list of 51 qualities (Figure 2), or attributes, of the urban environment. Of these, eight were selected by the research group for further study based on the importance attributed to them in the literature: imageability, enclosure, human scale, transparency, complexity, coherence, legibility, and connectedness.

Imageability

Imageability refers to the quality of a place to stand out, to be memorable. A place has high imageability when specific physical elements and their arrangements capture attention, evoke feelings, and create a lasting impression on the observer. It is probably not a single element that makes a street memorable, but rather a combination of many elements.

For Lynch (1997), a city with a high level of imageability is well organized, contains distinct parts and is instantly recognizable to anyone who has visited or lived in it (Figure 3).

Enclosure

Enclosure refers to the way in which public space is visually defined by its immediate surroundings. These are spaces where the height of vertical elements is proportionally related to their width, creating the notion of enclosure. Outdoor spaces are defined and shaped by vertical elements that interrupt spectators' lines of sight. When sight lines are so heavily blocked that they make outdoor spaces appear as though they are indoors, such as a bedroom, a sense of enclosure occurs. For Cullen (2009, p. 27), "[...] the enclosure is the goal of circulation, the place where [pedestrian] traffic leads us. Without it, traffic would become absurd" (Figure 4).

Human Scale

Human scale refers to the size, texture, and articulation of physical elements that relate to the size and proportions of people and the speed at which they move through the environment. The City of Seattle Urban Design Guide (2004) defines human scale as the quality of an environment that includes structural or architectural components of a size and proportion that relate to the human form and/or that display, through their structural or architectural components, the human functions contained within (Figure 5).

Transparency

Transparency refers to the degree to which people can see or perceive what is beyond the boundary of a street or other public space

and, more specifically, the degree to which the individual can see or perceive human activity beyond the periphery of a street or other public space. Physical elements that influence transparency include walls, windows, doors, fences, landscaping, and openings in intermediate spaces. For Jacobs, (2011), these elements contribute to the perception of human activity beyond the street (Figure 6).

Complexity

Complexity refers to the visual richness of a place and depends on the variety of the physical environment, specifically the number and type of buildings, architectural and ornamental diversity, landscape elements, street furniture, signage and human activity.

For Rapoport (1990), complexity is related to the quantity of notable differences to which the viewer is exposed per unit of time, that is, the time spent in the location is as relevant as the quantity and quality of the attractions available. Humans feel more comfortable receiving information at a perceptible pace; too little information generates disinterest, too much information generates sensory overload (Figure 7).

Coherence

Coherence refers to a sense of visual order. The degree of coherence is influenced by consistency and complementarity in the scale, character and arrangement of the building, landscaping, street furniture, paving and other physical elements (Figure 8).

Studies of street signage have indicated that pedestrians prefer environments with moderate and consistent signage. If the elements have enough features in common, the street scene will appear orderly, logical, and predictable to pedestrians; if not, it will appear cluttered (Ewing and Clement, 2013).

Legibility

Legibility refers to the ease with which the spatial structure of a place can be understood and visualized as a whole. The legibility of a place is enhanced by a network of pedestrians and pathways that provide the user with a sense of orientation and relative location. Physical elements serve as reference points (Figure 9).

Lynch (1997) suggests that when people encounter a new place, they automatically create a mental map that divides the city into paths, boundaries, districts, nodes, and landmarks. Places with strong boundaries, distinct landmarks, and busy streets allow people to form detailed and relatively accurate mental maps.

Linkage

The connection refers to the physical and visual connections between the building and the street, between two or more buildings, between public spaces and, also between two sides of the same street, with a tendency to unify disparate elements, such as tree lines, building projections and marked intersections (Figure 10).

Figure 2 – The 51 qualities or attributes perceptible in the urban environment, highlighting the eight selected

Fifty-One Perceptual Qualities of the Built Environment

adaptability	singularity	naturalness	identifiability	deflection
distinctiveness	clarity	texture	ornateness	interest
intricacy	<u>enclosure</u>	compatibility	upkeep	regularity
richness	meaning	formality	continuity	vividness
ambiguity	spaciousness	novelty	<u>imageability</u>	depth
diversity	<u>coherence</u>	<u>transparency</u>	prospect	intimacy
<u>legibility</u>	expectancy	complementarity	variety	rhythm
sensuousness	mystery	<u>human scale</u>	contrast	
centrality	territoriality	openness	intelligibility	
dominance	comfort	unity	refuge	
<u>linkage</u>	focality	<u>complexity</u>	visibility	

Source: author based on Ewing and Clement (2013) in 2018.

Figure 3 – Measuring imageability through images, San Francisco/California



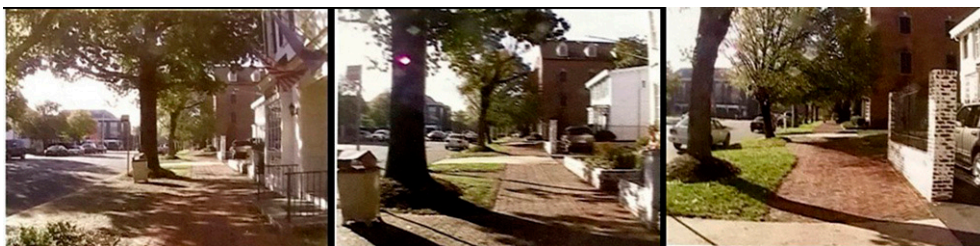
Source: author based on Ewing and Clement (2013) in 2018.

Figure 4 – Images demonstrating the enclosure attribute, city of Charlotte/North Carolina



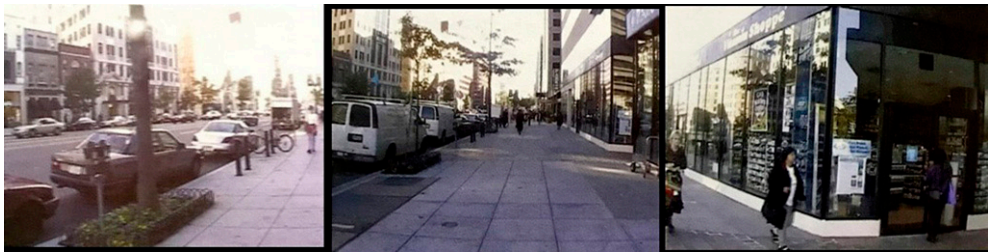
Source: author based on Ewing and Clement (2013) in 2018

Figure 5 – Images demonstrating the human scale attribute, in the city of Alexandria/Virginia



Source: author based on Ewing and Clement (2013) in 2018

Figure 6 – Images demonstrating the transparency attribute, city of Washington/DC



Source: author based on Ewing and Clement (2013) in 2018.

Figure 7 – Images demonstrating the complexity attribute, New York City/NY



Source: author based on Ewing and Clement (2013) in 2018.

Figure 8 – Images demonstrating the coherence attribute, city of Annapolis/Maryland



Source: author based on Ewing and Clement (2013) in 2018.

Figure 9 – Images demonstrating the readability attribute, city of Charlotte/North Carolina



Source: author based on Ewing and Clement (2013) in 2018.

Figure 10 – Images demonstrating the connection attribute, New York City/ NY



Source: author based on Ewing and Clement (2013) in 2018.

However, according to the researchers themselves, among the eight qualities or attributes of the urban environment chosen, only the first five – imageability, enclosure, human scale, transparency and complexity – could be successfully measured, passing the

validity and reliability tests. These were applied in later work that connected the perceptual qualities that influence walkability with practical measurement tools based on empirical research and real-world applications.

Chart 1 – Summary of urban environment analysis attributes, their definitions, indicators and application procedures

Attribute	Definition	Indicators	Steps for measuring attributes	
Imageability	The quality of a place that makes it unique, recognizable and memorable	When specific physical elements and their arrangement complement each other, they evoke feelings and create a lasting impression. Architecture that suggests importance, the presence of historic buildings and landmarks are the qualities of a place with imageability.	1	identify and count the courtyards, squares and parks within the study area;
			2	identify and count the main elements of the landscape, in addition to the study area;
			3	estimate the number of historic buildings, compared to other buildings within the study area;
			4	identify and count buildings with symbols that identify their use, such as shops and services within the study area;
			5	count non-rectangular elements on facades, such as circular windows within the study area;
			6	identify areas with space for tables outside of the environments within the study area;
			7	count pedestrians within the study area;
			8	estimate the noise level within the study area;
Enclosure	The degree to which streets and other public spaces are visually defined by buildings, walls, trees and other vertical elements	The space has the quality of an enclosure, the height of the vertical elements is proportionally related to the width between them. The buildings become walls of the open-air enclosure, the street and sidewalk become the ground.	1	identify the visual axes around the study area;
			2	estimate the proportion of facades, next to and opposite, within the study area;
			3	estimate the proportion of sky (clear sky area) in front of, beyond, and to the side of the study area;
			4	identify the existing trees on the street, on both sides, within the study area.
Human scale	Size, texture and articulation of physical elements that correspond to the size and proportions of human beings, considering the speed at which humans walk	Environment that contains structural or architectural components of sizes and proportions that relate to the human form. Street furniture in adequate quantity, aimed at pedestrians.	1	identify the visual axes, close to and around the area;
			2	estimate the proportion of windows (openings) at street level, near and around the area;
			3	estimate the average height of buildings near and around the area;
			4	identify small vegetation (for example, in pots on sidewalks) near and around the area;
			5	5A identify and count street furniture and other street items, near and around the area;
				5B identify areas with outdoor tables, near and around the area;
Transparency	The degree to which people can see or perceive human activity or what is beyond the edge of a street or other public space	The passerby could see human activity, or signs of it, beyond the edge of the street.	5C	identify exterior lighting on facades, such as wall lights, near and around the area.
			1	estimate the proportion of windows (openings) at street level, near and around the area;
			2	estimate the proportion of facades on the street, near and within the study area;
Complexity	The visual richness of a place that depends on the variety of the physical environment, including the number and types of buildings, architectural diversity and ornamentation, street furniture and human activity	Complex spaces have different shapes, sizes, materials, colors, architecture, ornamentation and obstacles, such as different types of windows, doors and lighting.	3	estimate the proportion of active uses, near and within the study area.
			1	count buildings, near and within the study area;
			2	2A identify the basic color of buildings within the study area;
				2B identify the colors that stand out on the buildings within the study area;
			3	identify outdoor dining locations near and within the study area;
			4	identify the presence of urban art (painting, sculpture and others), close to and within the study area;
			5	count pedestrians within the study area.

Source: author based on Ewing and Clement (2013) in 2018.

In this methodology, the attributes were analyzed based on on-site and on-foot observations and videos made in the locations chosen by the researchers for later analysis in the laboratory. For the correct application of the methodology, two questions must be understood: what are the attributes, how do they appear in the urban space and how can they be measured (Table 1).

According to Ewing and Clement (2013), measurements of physical characteristics found in the environment can help explain urban design qualities, and urban design qualities can help explain the overall walkability of a place.

Applying the methodology in a preserved center

The location chosen for the application of this methodology was the Centro neighborhood of the city of Laguna, located on the southern coast of Santa Catarina, which, in 1985, had its central area listed by the Instituto do Patrimônio Histórico e Artístico Nacional (Iphan), due to its importance for the colonization and development of the southern region of Brazil, as a way of guaranteeing its conservation.

The Centro neighborhood is also the founding center of the city, where political, religious and cultural manifestations take place, therefore, it is the symbolic space of the identity of Lagunense society, synthesizing its urban memory (Lucena, 1998).

The southern coast of Santa Catarina has records of human occupation since the prehistoric period, with the Sambaqui people.

During the colonial period, the region played an important role due to its strategic location in relation to the Platina basin.

The first settlements on the coast of Santa Catarina, which occurred in the 17th century, were the result of the Portuguese's concern to occupy the southern region of Brazil. There was a need to ensure the continuity of the Portuguese Empire up to the Río de la Plata, since the dispute with the Spanish who occupied that region was becoming more intense.

According to historian Oswaldo Cabral (1937), until mid-1658, the southern coast of Brazil – today Paraná, Santa Catarina and Rio Grande do Sul – had no stable foundations. However, São Francisco, Santa Catarina Island and Laguna were already known to navigators and explorers of the region as places where vessels could supply themselves with fresh water.

São Francisco do Sul, Nossa Senhora do Desterro, São José da Terra Firme and Santo Antônio dos Anjos da Laguna were the first colonized centers founded by the then Bandeiras of Settlement of São Vicente and São Paulo. The bandeiras were expeditions organized by private initiative, that is, without financing from the Portuguese government. The first expeditions of bandeirantes sought to capture indigenous people who could be sold as slaves, but later they began to search for metals and precious stones. During this period, the colonization of the South followed a different path than that of the North of the country. News of the existence of immense mineral wealth in the interior of the continent, such as that found in Mexico and Peru, aroused greed and interest in the interior regions. Argentina was known

as the land of silver, and the southern coast of Brazil, Santa Catarina and Rio Grande do Sul, as the coast of gold and silver.

The region was at the center of the dispute between the Portuguese and Spanish crowns, which resulted in the signing of the Treaty of Tordesillas in 1494, which passed through the city of Laguna. This fact of our history is so important to the local culture that, in the 1970s, the Treaty of Tordesillas Marker was erected indicating where the route would possibly pass.²

The municipality of Laguna is located on the southern coast of the state of Santa Catarina, 126 km from the capital Florianópolis via BR-101. It has a territorial extension of 336,396 km², with an estimated population of 40,000 in 2018. The 2010 Census of the Brazilian Institute of Geography and Statistics (IBGE) indicated that the city of Laguna had 51,562 inhabitants, however, in 2012, the district of Pescaria Brava was emancipated, which at the time had approximately 10,000 inhabitants.

According to data from the City Hall of Laguna (2022), the city has 35 neighborhoods, with the Historic Center and Magalhães being the oldest in the city. Its limits are, to the east, the Atlantic Ocean; to the west, the municipalities of Tubarão and Capivari de Baixo; to the north, the municipalities of Imaruí and Imbituba; and, to the south, the municipality of Jaguaruna.

The Centro neighborhood is located in the southern part of the city, on the banks of the Santo Antônio dos Anjos lagoon. The area, preserved by Iphan, includes the historic center, the surrounding hills and a 200-meter strip that enters the lagoon. The city's main economic activity is commerce and, although this area has

potential for cultural tourism, tourism-related activities are mainly concentrated on the beaches during the warmer months.

Its urban configuration, in the central polygon where the listed area is located, has an orthogonal design that follows the relief, with the Santo Antônio lagoon on one side and the Glória, Nossa Senhora and Moinho hills on the other. This configuration has peculiar characteristics, such as the position of the Santo Antônio dos Anjos church, which is not aligned with the Vidal Ramos square in front, as is common in colonial cities of the period, but rather with Conselheiro Jerônimo Coelho, street, with the square being displaced to the left, but facing the lagoon.

The Centro neighborhood, which is also the preserved center of the city of Laguna, houses public administration institutions, such as the city hall and banking institutions, in addition to various types of services and commerce, as well as areas intended for the leisure and enjoyment of the population, such as squares of various shapes and sizes and buildings for residential use.

What makes this area rich in possibilities is the presence of residential use, which, associated with other leisure, commercial and service activities, makes up a lively environment that interacts with the contemporary city, "which gives it a symbolic value superior to that of other neighborhoods in the city" (Cittadin, 2010, p. 124).

The city's first master plan was drawn up in 1978 and was in force until 2014, when a new plan was approved. This period coincided with the implementation of several public works, such as paving streets and expanding electricity and water distribution networks.

In the central area, some municipal heritage listings were proposed, concentrated around Praça República Juliana and in some isolated buildings. However, according to Lucena (1998), these heritage listings did not prevent the urban renovations permitted by the 1978 master plan, such as the expansion of the permitted height to four floors, which led to the demolition of several houses along Rua Gustavo Richard, formerly Rua da Praia, which were replaced by bank branches, offices and new residential buildings.

According to Lucena (1998), the destruction of this architectural and urban heritage was only not more devastating due to the subsequent Federal listing of the entire central area in 1985, which made it impossible to demolish any property in the city center.

From the time of the landmarking until the end of the 1990s, there was greater real estate expansion in the Mar Grosso region in relation to the central area. Lucena (1998, p. 52) considers that, from this period onwards, there was “a revival of activities, mainly commercial”. This was probably a consequence of the presence of new residents in the warmer months, attracted by the beach and carnival, at first, and later by the scenic and historical qualities of the rest of the city.

Throughout this period, post-listing, the urban configuration of the central area changed little, keeping the characteristics of its public

spaces practically unchanged, as most of the investments were concentrated to the east, in the Mar Grosso neighborhood.

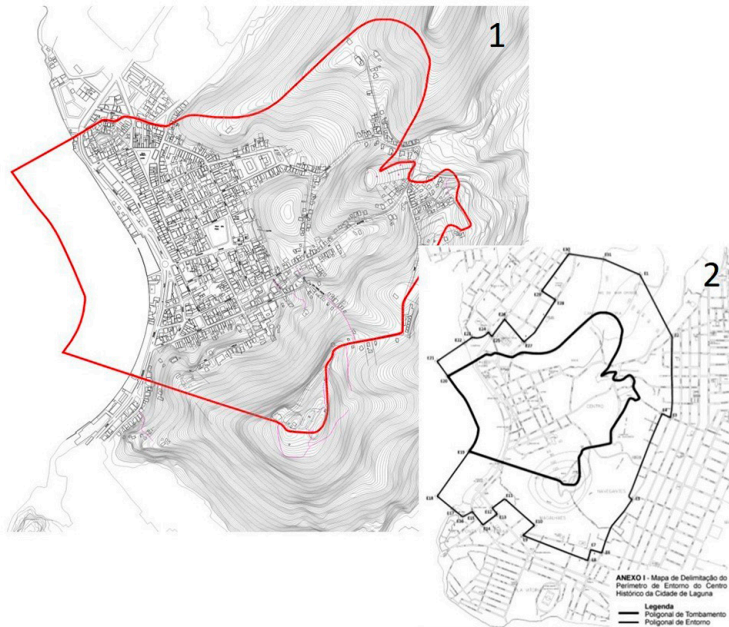
The public spaces of the Centro neighborhood were formed as the city itself changed over the decades. We can assume that initially, they were created spontaneously and randomly, according to the need for use and the spatial configuration generated by human occupation. Initially, the oldest public spaces, such as Praça da Matriz (Campo do Manejo) and Fonte da Carioca (Campo da Fonte), were created based on the daily and routine use of those who occupied the city, just as they would emerge in the following decades, as the city developed.

The listing polygon was defined during the listing process in 1984, when the Centro neighborhood underwent extensive analysis due to a listing opinion by Iphan, while the surrounding polygon was defined much later, in 2016 (Figure 11).

The listed polygon is delimited by imaginary lines, the polygons, which use the streets, including the lots that open onto them or the topographic elevations, to delimit the listed area to be preserved and, also its immediate surroundings. (Motta and Thompson, 2010, p. 84)

In the case of Laguna, the Centro neighborhood, located in the southern part of the city, on the banks of the Santo Antônio

Figure 11 – The Centro neighborhood and the indication of the listed polygon (1) and the surrounding polygon (2) – 2018



Source: author based on Iphan (2018)

lagoon, was listed as a heritage site. The area protected by the listing process included, in addition to the urban area and buildings, the surrounding hills and a 200-meter strip of the lagoon. During the process, in addition to the buildings and the road system, the landscape surrounding the city center was considered, understanding the entire area to be listed, and not just parts or disconnected buildings.

The region is home to public institutions, services and commerce, in addition to residential use. This characteristic means that the protected area is directly linked to the city's daily life and, therefore, should be understood as a dynamic environment where social and

cultural interactions take place and develop on a daily, basis. The areas analyzed are located within the boundaries of this protected polygon.

The Centro neighborhood has few urban voids, as it is a consolidated area. The voids are mostly composed of public spaces, such as streets, sidewalks and squares. The places analyzed were Praça da Matriz, Praça da República Juliana, Morro do Rosário, Largo da Carioca, the area of the public market and its dock and Praça Paulo Carneiro, which is in front of the Market. This initial analysis included the adjacent areas and the surrounding road system, as they also comprise public space (Figure 12).

Figure 12 – Current configuration of the Centro neighborhood, where we can see its consolidated form and its main public spaces



Source: author based on an image from PML (2018) and surveys carried out by the author in 2017.

In chronological order, the oldest public spaces in the Centro neighborhood are: Praça da Matriz, Praça da República Juliana and Largo da Carioca. For the development of the proposed study, the Centro neighborhood was divided into four sectors, encompassing one or more of the analyzed locations. The selection criteria were based on sociocultural relevance, urban configuration and because they contain the oldest areas of the neighborhood, identified during the historical-structural analysis and the construction of images (maps). For the development of this article, one of the sectors was selected, Sector 1, which encompasses Praça da Matriz, the surrounding streets and the boardwalk (Figure 13).

At the end of the 19th century, projects to improve the urbanization of the Centro neighborhood began public lighting was

installed and the main roads, such as Gustavo Richard and Raulino Horn, were paved with boulders or limestone.

In 1915, the Calheiros da Graça garden, now known as Vidal Ramos square, was inaugurated where the Campo do Manejo used to be. Its geometric layout included imperial palm trees (some of which still stand in the square), a circular fountain and a fence to keep animals out. The garden quickly became a place for leisure, parties and social gatherings, which had previously taken place in Conde D'Eu square, now República Juliana square.

The Blondin (1917) and Congresso (1935) clubs and the Cine Teatro 7 de Setembro (1858) were built in its surroundings, which reinforced the social character of the public garden. In 1925, the square's fence and wall were removed and, with the closing of the cinema in the

Figure 13 – The Centro neighborhood with the indication of the four sectors analyzed (outlined in red), and Sector 1 presented in this article (painted in red) – 2017



Source: author, in 2018

1960s, the square and other areas of the Centro neighborhood began to lose their movement on weekends (Lucena, 1998).

Over the last decade, the municipal government and private entities have promoted events in the Centro neighborhood (Figure 14), some monthly and others annual, with the aim of encouraging people to visit the area and fostering urban dynamics. Among these events, we can highlight the monthly Free Crafts Fair, the Pre-Carnival and the Santo Antônio Festival, which is annual.

In Sector 1 (Figure 15), you will find the oldest and most traditional public spaces in the neighborhood, such as Vidal Ramos Square. It

is possible to consider that its public spaces maintain practically the same configuration they had when Vila da Laguna was created. The wattle and daub chapel built in 1696 gave way, in 1738, to the Santo Antônio dos Anjos da Laguna Church, or simply the Main Church, and to the old Campo do Manejo, now Vidal Ramos Square.

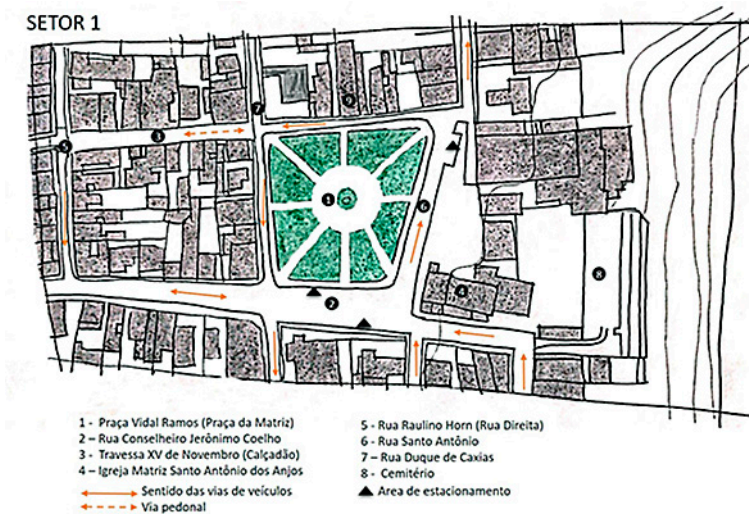
This sector includes the Vidal Ramos or Matriz square, the boardwalk (XV de Novembro street) and other adjacent streets. This is the area where the city began, the site of the first chapel and the first residences, including one of the most traditional. Mapping the Vidal Ramos square area showed that it is widely used

Figure 14 – Events that take place in the Centro neighborhood and in Sector 1:
Craft Fair (1); Pre-Carnival (2); Santo Antônio Festival (3 and 4)



Source: author based on images from the website of the Municipal Government of Laguna (PML, 2018).

Figure 15 – Sector 1, with the identification of the public open spaces analyzed – 2018



Source: author, in 2018.

both for leisure and for staying, as well as for circulation and connection with the surrounding streets.

In terms of use and quality of public space, we can say that the most significant urban elements are the Vidal Ramos and Matriz squares. Throughout the city's development, the square was modified until, in 1930, it received its current configuration, which remains to this day. In addition to the square, a more recent urban element is the XV de Novembro Street promenade, built in the early 2000s, which recently underwent a reconfiguration of its space, with the installation of new paving, new street furniture and a drainage system based on

green infrastructure, which proposes a more natural form of urban drainage.

In relation to the other areas of the Centro neighborhood, Sector 1 plays an attractive role due to the diverse uses found there: two of the four bank branches in the city, a variety of shops and services, residential and religious buildings, such as the Matriz church and the spiritualist center, considered one of the oldest in the state, and cultural buildings, such as the Santo Antônio cultural center and Anita's house. For all these reasons, it is a very popular area, housing both residents of the sector and users and workers of the services and businesses offered in the neighborhood (Figure 16).

Figure 16 – Sector 1: XV de Novembro Crossing (1), Conselheiro Jerônimo Coelho Street (2), Santo Antônio Street and, in the background, the Matriz Church (3), sidewalk, continuation of XV de Novembro Street (4), Vidal Ramos Square or Matriz Square (5) and Santo Antônio Street (6) – 2018



Source: author, in 2018.

Initial considerations on the application of the methodology in a preserved center

We can identify that Sector 1 has both daily and seasonal uses. We consider daily uses to be those of residents and visitors to the Centro neighborhood, for example, during mass times; seasonal uses are those that occur once a year, such as the Festa de Santo Antônio, which uses the space of Praça Vidal Ramos and the adjacent streets for the festivities that always take place in the first half of June. Regarding the urban design qualities analyzed – imageability; enclosure; human scale; transparency and complexity – we were able to see that, even if its public space does not have quality maintenance or infrastructure, this space has not lost its qualities.

Sector 1 was analyzed, as previously defined, initially by reading the urban space and then by reading the user space, with the measurement of attributes. The summary of this analysis is presented in Chart 2.

According to Ewing and Clement (2013), measurements of the physical characteristics found in the environment can help explain the qualities of urban design and, furthermore, the qualities of urban design can help explain the overall walkability of a place.

Considering the attributes inherent to an old city center, such as imageability and complexity, such measurement can contribute to the more appropriate development of manuals for the use of public spaces in preserved cities.

When measuring the qualities of urban design, when identifying the attributes of imaginability, framing, human scale,

transparency and complexity, the importance of building facades in the composition and configuration of public space was considered. Considering the aesthetic and beauty attributes of historic buildings, this relevance, in the case of Laguna, acquires greater importance.

Another important issue was understanding that public spaces in a protected city differ little from others, perhaps only in terms of impermanence, since, when a city is listed, its configuration and relationship between built spaces and open spaces remains unchanged for a longer period. Even so, the way in which spaces relate to each other maintains the same characteristics as in other cities.

It is worth noting, however, that the configurations of public spaces found in Sector 1, analyzed for the preparation of this article, are directly related to the size of the neighborhood and the city as a whole and can only be compared to public spaces in other cities of the same size and similar characteristics.

Finally, regarding the use of the methodology, we consider that it is adequate for reading the user's space when we consider the scale of the street and the square, which is the pedestrian scale, where the attributes that can define the quality of urban design on the pedestrian scale are found.

However, to be efficient, this analysis must consider the other scales of urban space: the city scale, in which legislation, forms of land division, physical support and urban policies must be analyzed, and the neighborhood scale, in which we can measure and identify urban infrastructure, the relationship between private and public open spaces.

Chart 2 – Summary of the sector analyzed

Attribute (Quality attributes of urban public space)	Steps	Label*	Observations
Imageability	Presence of accessible court-yards, squares, parks and gardens	XXX	Although the item on the presence of historic buildings may seem redundant because it is a listed site, we consider it relevant to keep it. As for the estimated noise level, business days and hours were considered. Even though it is a smaller-scale center, there is a large presence of motor vehicles during all business hours. There is an attempt to use the sidewalks by local cafes and restaurants on other streets in the neighborhood, but this sector is still little explored.
	Major visible/prominent landscape features	XXX	
	Presence of historic building	XXX	
	Buildings with use identification	XX	
	Presence of outdoor dining areas	–	
	Presence of people	XXX	
	Noise level (estimated)	**	
Enclosure	Presence of strong visual axes	XXX	Regarding the setting, Sector 1 can be considered homogeneous, being quite like the surrounding neighborhood when we consider the landscape characteristics of the site where it is located. We can consider that the presence of the lake and the hills provides the setting for the entire neighborhood, contributing to the quality of the local urban landscape.
	Proportion of facades on both sides of the street	XXX	
	Sky proportion	XXX	
	Presence of trees, both on the street and in private yards	XX	
Human Scale	Presence of strong visual axes	XXX	The almost total absence of buildings with more than four floors contributes to the human scale attribute being homogeneous and of a similar nature throughout Sector 1, as well as throughout the entire Centro neighborhood. The restrictions of the listing prevent the verticalization of the neighborhood and contribute to the maintenance of this attribute.
	Presence of windows and/or display cases at street level	XXX	
	Building height	XXX	
	Presence of small vegetation on streets and sidewalks	X	
	Presence of street furniture	XX	
	Presence of areas with tables on the sidewalk	XX	
Transparency	Presence of windows and/or display cases at street level	XX	Activities, as in many centers, are concentrated during business hours, with fewer activities on weekends. However, the presence of neighborhood residents is still noticeable in Sector 1, especially in Praça Vidal Ramos.
	Proportion of facades on both sides of the street	XXX	
	Presence of activities and uses	XX	
Complexity	Presence of different buildings	XXX	The palette and colors to be used on the facades are determined by IPHAN's preservation standards, which makes Sector 1 and the entire Centro neighborhood quite homogeneous in this regard. Artistic interventions in the urban space are still few or incipient and, therefore, do not cause a visible impact. Sector 1 is home to a large part of the commerce and banking activities, as well as some residences, which seems to contribute to the large human presence on the days and times analyzed.
	Identify the basic color of the buildings (predominance) Presence of colors that stand out in the buildings	X	
	Presence of outdoor dining areas	XX	
	Presence of urban art	X	
	Presence of pedestrians	XXX	

*Label: X insufficient; X regular; XX good; XXX very good; – not apply; noise level: high ***, regular **, low *
Source: author, in 2018.

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Notes

- (1) The theme of this article is related to broader research that seeks to identify the relationships between the preservation of central areas and the quality of urban design.
- (2) We understand that there are several academic works that deal with the formation of the Brazilian territory and, more specifically, the Treaty of Tordesillas, but, despite its relevance, it is cited here due to the historical context and the formation of the city of Laguna.

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