Node and Place: spatial dilemmas around Transport Stations

Nó e Lugar: os dilemas espaciais no entorno das Estações de Transportes

Yara *Baiardi* [I]
Angélica Benatti *Alvim* [II]
Jorg *Schröder* [III]

Abstract

This study analyzes spatial transformations at Station Areas in the city of São Paulo to further the debate on spatial dilemmas between Node and Place. Case studies of the Pinheiros and Faria Lima Station Areas analyze and discuss their spatial attributes based on Urban and Transport categories, both in the meso- and micro-scales. The study considers that there is an inherent ambivalence between Node and Place as a source of conflicts, but also an opportunity for urban (re) development and/or renewal. The results show that, despite extensive spatial transformations in the studied Station Areas, the ambivalences between Node and Place have not been overcome; rather, they were exacerbated.

Keywords: node of transport and place; spatial dilemmas; Pinheiros Station; Faria Lima Station; urban renewal.

Resumo

Este artigo analisa as transformações espaciais no entorno das estações de transportes na cidade de São Paulo, de modo a contribuir para o debate acerca dos dilemas espaciais entre Nó de Transporte e Lugar. Tomadas como estudo de caso, as áreas das estações Pinheiros e Faria Lima são analisadas por meio de seus atributos espaciais, a partir das categorias do urbano e dos transportes tanto na escala meso (intermediária) como na escala micro (local). Considera-se que há uma ambivalência inerente entre nó e lugar, que serve de base para tensões, mas também apresenta uma oportunidade para o (re)desenvolvimento e/ou a (re)qualificação urbana. Os resultados evidenciam que, apesar das intensas transformações espaciais nas áreas das estações estudadas, as ambivalências entre nó de transporte e lugar não foram superadas; pelo contrário, foram reforçadas.

Palavras-chave: *Nó de transporte e lugar; Dilemas espaciais; Mobilidade Urbana; estação Pinheiros; estação Faria Lima.*

Introduction

This study investigated the spatial dilemmas involving Transport Nodes (Pinheiros Subway--Train-Bus Station and Faria Lima Subway Station) versus Place (Largo da Batata and surrounding area) in São Paulo city. This is a region located in the south-western vector of the city, understood as an important historical and urban centre, the stage for intense morphological transformations, especially those resulting from the national competition "Largo da Batata Urban Reconversion Project", promoted by the São Paulo City Council (PMSP) and the Institute of Architects of Brazil (IAB) in 2001.

The research is based on the premise that in stations areas there is an ambiguity between Node and Place (Bertolini, Spit, 1998, p. 10), a dual nature which poses a number of challenges in terms of development. Thus, this dual ambiguity must be addressed, typically presenting dilemmas in the urban development process in the areas surrounding subway-train--terminals, particularly spatial and physical aspects, as well as functional, temporal, financial and management dilemmas.

According to Bertolini and Spit (1998, pp. 212-216), spatial ambivalences represent distinct dilemmas in terms of scale and complexity. Functional ambivalence generate dilemmas both in the specific characteristics of each element and collision of functional interests between them in space. The time--related dilemma, which represents the process of development of Place and Node in Station areas tends to take different paths, which creates additional challenges in the interdependence of these elements and in the design resulting from the combination of both. In addition to the high investments needed to develop an intermodal station, there are also ambivalences in the management of these spaces, which are often the responsibility of different sectors. In this way, all these dilemmas end up combining or conflicting in the management of space in and around station areas.

While on the one hand Transport Nodes are key elements for promoting macro--accessibility of the transport system and access to different areas of the metropolis, on the other, there is a fragile spatial relationship of these facilities in the urban space at a local level. Hence, a paradox/ambivalence/ dilemma between Node and Place exists: solely functional interventions within the context of transport which qualitatively fail to articulate with the urban fabric and dynamics of the area.

Therefore, the ambivalence inherent to Station Areas represents a source of conflict yet can also act as a catalyst for (re)development of the area and/or urban renovation. Coordinating Transport Nodes with the dimensions of Place in Station Areas, i.e., making these compatible and balanced, conferring benefits to both aspects, can be challenging.

The research that led to this article[1] defends the idea that improving urban mobility requires more than specific large-scale infrastructure projects (such as a train and metro station) or urban instruments applied to the plots of land surrounding the stations, since such actions do not bring about changes in the logic of urban development or the qualification

of urban space. We need to go further and combine ambivalences, turning them into opportunities.

The choice of the Pinheiros and Faria Lima stations as case studies enriches the debate on the spatial dilemmas between Node and Place given their strategic locations in the city. These intermodal stations differ in size, are situated in distinct areas (empty land plot versus a consolidated area) and are objects of the same urban instruments.

The first part of the article covers the body of knowledge produced in this field. In the second part, a method for codifying categories into urban and transport is shown, devised to assist the analyses of spatial dilemmas and for application to the object under study on both meso and micro scales. The third part of the text provides an analysis of the case study, showing the physical-spatial transformations in the areas surrounding the stations. Lastly, the findings pertaining to the spatial ambivalences between Node and Place in the Pinheiros and Faria Lima station areas are examined.

Node and place in structuring territory

Suzuki, Cervero, Iuchi (2013) highlighted that the smooth running of transport systems underpins the sustainability of cities. Smets and Shannon (2010) emphasized the new role of contemporary infrastructure in the landscape, whereby this should interact with the architecture, mobility and the city by *integrating territories*.

The conventional approach of *transport planning* involves: 1) Physical dimensions and large scale; 2) Focus on traffic, particularly motor vehicles; 3) The street as a space connecting one place to another; 4) Traffic prediction and use of modeling tools; 5) Minimizing journey time and therefore segregating people in this traffic. By contrast, the alternative approach of *human sustainable mobility* encompasses: 1) Social dimensions and small scale; 2) A focus on people with or without vehicles, particularly in active mobility systems; 3) The street as a space to be managed and coordinated; 4) Discussion of the model of the city, scenarios of urban development and journeys not based solely on demand, but as valuable activity; 5) Incentive for shorter trips, reasonable journey times and integration of people and traffic (Banister, 2008, p. 73).

Given that the subway-railway stations in São Paulo are large items of infrastructure, there is a recognized need in the 21st century to modernize their identity as stations with simple access, address their architectural programs, revisit the design of the areas surrounding them, and reinvent their *relationships with city* (Bertolini, Spit, 1998), particularly on micro (station area) and macro (buildings) scales.

After all, what is Place? What is a Transport Node? Cacciari (2009), in his book, questioned whether it was possible to live without Place. He proposed that a post-metropolitan territory can be inhabited, but this is only possible if it makes itself available, whether it allows for Places. According to the author, “"Place is where we stop: it is the pause – analogous to the lull in a musical score. There is no music without these breaks of silence”

(2009, p. 35). However, in the post-metropolitan territory, one is not allowed to stop, to take refuge. Restoring Place is considered regressive and reactionary. One either applauds the dissolution of Places, is a victim, or construes this as a technical issue to be resolved.

In another line of argument, the French anthropologist Augé (2012) holds that Place is that which gives rise to *relation, identity and history.* In his book, he also interprets the complexity of today´s society – supermodernity –, which gives rise to what he calls the proliferation of *Non-Place*, of experiencing loneliness. In this sense, he states that "the world of supermodernity does not have the exact dimensions that we think, because we live in a world which we have not learned to examine. *We must relearn how to construe space*" (Augé, 2012, pg. 37, our bolding).

The *space of a traveler* is the archetype of Non-Place. The traveler has partial glimpses, the experience of someone obliged to contemplate the landscape and who, hence, cannot "take ownership" (Augé, 2012, p. 80). Travelers thus feel loneliness, the experience of Non-Place as removal of oneself to become the spectator, where only fleeting images can be glimpsed. In some ways, users of Non-Place must always prove their innocence, in as far as their identity as a *public person is denied*. In other words, they must, *a priori* or *a posteriori*, tender a ticket or credit card or own a motor vehicle.

In the sphere of geography, Santos (2014 p. 81) holds that space is an indissociable group of an arrangement of "geographical objects, natural objects and social objects" coupled with "the life that fills it and confers vitality, i.e., society at large". Thus, in order to appreciate the complexity of the spatial phenomena, one must understand how form, function, structure and process interrelate to compose and recompose space. Relph (2014, pg.23) defines the term geography of place as that which elucidates the ways people interact with the space.

Thus, spaces, Places and Non-Places merge and interweave. The multiple interpretations of Place can be boiled down to the idea of that which adapts to use and to events, bringing together space and time. That which never is, but becomes Place by conferring Place to the Place of our consciousness at the time as its apprehension and recognition (Guatelli, 2012) creating identity, relational and historical meaning. Place in a Station Area (Baiardi, 2018) is that which offers freedom *to appreciate the experience of time when traveling*, where abode can occur in a permanence when the architecture of the stations and its surroundings are polyvalent, making the traveler part of the landscape.

By contrast, amid new forms of communication (Hall, 2004; Castells, 2010; Ascher, 2010) and urban transformations involving the network and the system, the *Transport Node* takes precedence, especially in the production and development of the space.

The *Transport Nodes*, such as subway and train stations, bus and airport terminals, and ports are part of the transport system that can confer metropolitan or global connectivity to a territory by serving as an *access point to a wider network*. Nodes are, geometrically speaking, the basic component of a network.

Bertolini and Spit (1998, pg.9) define Nodes as "points of access to trains and, increasingly, to other transport networks". Izaga (2009, pg.88) holds that nodes are the points where spatial accumulation of activities takes place, reflecting centralities according to the economic importance of the urban functions they provide, such as production, distribution, administration, commerce, and where a hierarchy of importance emerges.

Citing Richer (2008), Transport Nodes are hubs interconnecting 2 or more transport systems, constituting an intersection of transport routes and are *an integral part of the system and not the territory.* This space is characterized by frequent changes and influences the passage and flow of pedestrians on a local scale. The author states that Transport Nodes are fundamental for structuring the territory in which they are incorporated. However, public space is the central element which strengthens the *connection of man to Place*. Therefore, this urban dyad – Node and Place – should ensure the interconnection between the city and transport systems.

Hence, Station Areas have the potential to become not merely another point of access to the functionalist Node within the logic of a modernist city, or Non-Place – a space for rapid passage in or out, but conceived as a *Place* (Baiardi, 2018). A location of identity, relation, history, dwelling and pause. A place of experience of time and not of space; a catalyst for affective ties, to intensify an indeterminate fluid event. Within it, a host of dilemmas and challenges are overcome; within it technique is harmonized and man is restructured into the space.

Spatial dilemmas between node and place

This dilemma stems from the process of urban development and/or restructuring upon determining the limits of spatial coordination between the geographical support and technical interventions in the space. Thus, it is hard to break with the logic of the protagonism of travel network interventions and of implementation of public transport equipment – albeit station or bus terminal – *closed within themselves in the urban space and not Place*, the predominant logic throughout the 20th century.

Portas (2011, pg.23, own bolding) points out that with regard to the Urban, only the strategy which places the *urban question* front and center can be trusted, the "intensification of urban life, the effective realization of urban society (i.e. its morphological, physical, practical-sensitive base)".

In this respect, we emphasize the concept of *urban morphology,* i.e. the study of urban form, "considering it the physical product of the actions of society on the medium, which will erect it over time (Costa, Netto 2015, pg.31). The authors put forward different positions on the topic, one of which is the concept by Conze (2004), where urban morphology is construed as:

> [...]the study of the built form of cities, whose state seeks to explain the trajectory and spatial composition of urban structures and open spaces, of a physical nature and symbolic meaning, in the light of the forces that create, expand, diversify and transform them. (Apud Costa, Netto 2015, p. 31)

This constitutes a field that is closely related to that of *Urban Design*. Del Rio (1990, pg.54) defines this concept as a "*group of physical-spatial systems* and activity systems which interact with the population through experiences, perceptions and everyday actions". In other words, urban design can be defined as the study of physical and spatial characteristics of the urban structure (apud Costa, Netto 2015, p. 30, own bolding).

Thus, based on the urban question, and urban form and design, an organized space should instill a feeling of emotional security. Lynch stated that "legibility is crucial for the urban scenario [...] This concept can be adopted in our cities to provide them with new form" (Lynch, 1997, pg.3). In this context, legibility or clarity can be defined as:

> something which is endowed with special importance with regard to environments in terms of the scales of dimension, time and complexity. To appreciate this, it is important to consider not only the city as an entity, *but the city as perceived by its inhabitants* [...]. *It is the ease in which each of the parts can be recognized and organized into a model*. A legible city is one whose districts, landmarks or roadways are readily recognizable and grouped under a general model (1997, p. 3, own bolding).

Therefore, the conception of a Transport Node which identifies the most appropriate forms for intervention so as to promote cohesive spatial transformations coordinated with the site and the urban form of its surroundings *[P1-P2]* is an important process and design challenge which cannot be overlooked or addressed alone by only some sectors. It is paramount to understand how form, function, structure and process – structuring elements of urban design - coordinate with the Nodes. Failure to understand this interaction, will inevitably lead to the implementation of major infrastructure [N1-N5], such as freeways, subway and train lines, and/or bus terminals – which compete for the use of public space - can impose a scale disproportionate with human scale, and planning of spaces that do not optimize or enhance the urban space.

It is no easy task to construct Places that are congruent not only for providing access to a stop, station, or point of entry to a terminal, but also for supporting events, combining space and time, pause and stay, thereby embracing the demands and problems inherent to time itself. Hence, the architectural form associated with the program of uses *[P3]* confers meaning to the many activities in the area surrounding stations such as living, working, shopping, leisure and mobility. However, this goes beyond attributing/assigning functions to a space: upon setting out a program and different densities in the vicinity of the station, the use of the area is indeed influenced, as is the perception of the urban landscape. Yet it is difficult to tackle the strict logic of an outdated program amid increasing flows, the numerous possibilities for intermodality, permanences and social exchanges in public spaces.

That said. Implementing major mobility infrastructure facilities at existing sites, coordinating these to the land uses and densities of the surrounding area, and electing and quantifying the "new" activities and densities envisaging urban "renewal" or development without disrupting the station surroundings is a complex, non-linear

process. The incorporation of new urban design practices is fundamental *[I7]*, such as a Masterplan *[I5]* (Baiardi, Hagemann, 2019; Baiardi, 2018) that coordinates the scales and complexities among the different agents, overcoming temporal, functional and managerial dilemmas and challenges.

There is also a need to overcome the use of private motor vehicles in most public spaces, particularly Station Areas. To this end, ensuring *Microaccessibility*[2] *and intermodality* of a station across all modes of transportation *[N6-N11]* with *spatial equity and quality* is the target goal (Baiardi, 2012).

Lastly, there are many spatial dilemmas to be overcome on the ground (Lamas, 2010) surrounding stations *[P4]*. This poses the design challenge of dealing with a territory segregated like a ghetto, bounded by fences and walls contributing to low spatial connectivity and the notion of urban voids, many of which are associated with designs and building projects for implementing transport infrastructure. It is critical to reassign meaning to these spaces, where public space and the transitions with private space constitute structuring and cohesive elements.

Hence, the real challenge lies in configuring the territory of a Station Area as a Place facilitating the perception of the parts recognized and organized in a coherent pattern, by incorporating Nodes that do not constitute Non-Places (space failing to create identity but instead a lone individuality, ephemeral space of transition, measurable in units of time) (Augé, 2012). Identifying the gaps emerging between Node and Place can help elucidate where exactly the problems lie, their root causes, and how to tackle and overcome them. In response to this need, a method of analysis has been devised, as outlined in the ensuing text.

Method of analysis

Urban space can be subject to multiple different readings and interpretations depending on the methods used. In the sphere of Urban studies, instruments that are able to organize and structure elements and their reciprocal relationships are needed (Lamas, 2010, p. 63).

In addressing the object of the present study (spatial ambivalence between Transport Node and Place), an analysis on two urban scales (meso and micro) was adopted based on two categories – Transport and Place – and different design codes.

With regard to urban scales, Silva and Romero (2011) stated that, in order to instrumentalize the analysis of urban space using the scales, it is necessary to attain an overall perception of the whole, but also the particularities. Under this approach, the meso scale is at the neighborhood or sector level. The scale is defined based on the criteria of productive organization of the space, such as *morphological relationships*. It is at this scale that the physical conditions of its configurations in all its diversity are explored.

Lastly, the local scale is referred to by Silva and Romero (2011) as the specific scale of Place which corresponds to the space which is public and of value for everyday actions. This is the scale of an observer at any point in the city. The authors also note that Brazilian cities suffer

from the absence of a technical methodological approach to urban planning, particularly on a local scale of urban design, resulting in a fragmented Cartesian view.[3] Also, Duffhues and Bertolini (2016, p. 31) argue that even when there is integration between transport and land use policies, local-scale dilemmas are not guaranteed to be resolved, as the most difficult crucial decisions are made at another level, usually the municipal or regional level.

Carmona (2014) adds that the problems of urban complexity lead researchers to adopt *mixed methods* for investigating urban design including: 1) Evidence or source-based studies (primary or secondary); 2) Knowledge-based research; and 3) Research based on daily routine, inductive versus deductive.

Thus, the research can be regarded as *a descriptive* method because a systematic explanation of reality or registration of events occurs. This also constitutes an *exploratory* study given the goal is to identify, define and illustrate certain relevant phenomenon, explain some specific characteristics and inter-relational effects based on *subjective* analysis by the researcher, i.e. presumptions exist, such as the question of quality. Last of all, it is a deductive study since the presumptions are tested and assessed, i.e. the hypothesis is confirmed by interpretation and application of accumulated knowledge, data and information. This gives rise to a *three-way method* encompassing a descriptive, exploratory/subjective and deductive study (Jong, Van der Voordt, 2002).

Descriptive and exploratory analyses are based on design codes adapted from Carmona (2014). As the author points outs, the codes are tools within the development of a process that may or may not be used. However, the codes provide a guarantee of the quality of the design to be attained, which may also help ensure coordination of the different phases of the process across the different parts involved. Thus, the approach of the scales, the categories mapped to the codes used for the main dilemmas identified, and the guiding questions which describe them, are outlined in the charts below.

Chart 1 – Summary of method of analyses between urban and transport categories on intermediate scale

	CAT	Codes	Dilemmas and challenges in land structuring	Guiding questions
Intermediate Scale > Station Scale	Urban	Context of regional history [P0]	(not applicable) Provides brief background only	What are most relevant guiding urban/ historical/socioeconomic events ?
		Conditioning factors [P1] and/ or structuring elements of [N0] urban fabric [design of streets and blocks]	Dilemmas and Challenges of the site, urban form and cohesive spatial transformations (streets and blocks)	What were the conditioning factors of urban structuring? What is the design of streets and blocks like?
		Occupation types [P2] [design of existing landplots – buildings]	Dilemmas and Challenges in formal coordination between new and old uses, densities and types Challenges of building a landscape	What were the predominant uses, densities and types of landplots in the region before and after the intervention at the stations? What are the main urban references?
	Transport	Transport Systems Train and subway lines, bus, cycle paths [N1 + N2 + N3 + N4 + N5]	Dilemmas and Challenges of the predominance of segregated major infrastructure in the territory	What are the *lines* of the existing transport system serving the region?
	Instrument	Masterplan [I1]; Zoning [I2]; Regional Plans [I3]; Urban operation [I4]; Local Master plan [I5]; Others [I6]	Challenges posed by absence of urban design instrument coordinating between scales and different agents involved	What existing urban instruments impacted the space around the station areas since their conception up until 2014?

Source: prepared by the authors based on Baiardi (2018).

Chart 2 – Summary of method of analyses between urban and transport categories on local scale

	CAT	Codes	Dilemmas and challenges between place and node	Question
Local Scale > Station / Building Scale	Transport	Microaccessibility [N6] pedestrian + [N7] subway + [N8] train + [N9] bus + [N10] bicycle + [N11] motor vehicle	Dilemmas and Challenges of Microaccessibility and intermodality to Transport Node	How does microaccessibility and intermodality occur with the Transport Node?
	Urban	Buildings [P3] [minimum element]	Dilemmas and Challenges of Mono-functionality, definition of a technical/ closed program; Dilemmas between landscape and permanence	What architectural form do they take? What are their main uses? Is there an active façade?
		Urban Design [I7] + Local Territory [P4] [on the ground]	Challenges of an integrated urban space; Dilemmas of urban voids; barriers vs continuities; Challenges of integration/transition between private and public domain; and between Node (building) and Place (surroundings);	How have stations been incorporated into the urban landscape? Have new interventions of the Node been integrated /potentialized with surroundings in a fluid way or do spatial barriers/discontinuities exist? Is there coherent urban form between Node and Place ?

Source: prepared by the authors based on Baiardi (2018).

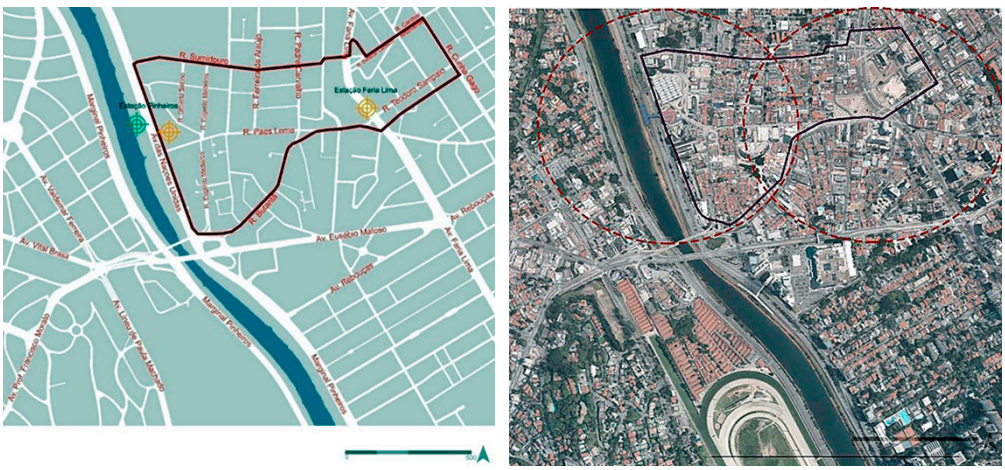
The time window for the study spans from conception of the subway stations, associated with the prevailing Masterplan (2014), up until 2022, the year of the last intervention in the area. Numerous visits *in loco* at the sites of the case studies were made for the investigation. The field work, interpretation of documents and data, as well as the production of diagrams[4] and photographs, were guided by the observation and reflection of the researchers as outlined in more detail below.

Pinheiros and Faria Lima station areas

Based on the urban design codes proposed by Carmona (2014), an analysis of Node and Place in the areas of Pinheiros and Faria Lima Stations was carried out. The delimitations of the study are the same as the perimeters defined for the "Project for Reconversion of Largo da Batata", but overlaid on the generic buffer zones of 600 meters used widely in studies both in the area of transport and the Municipality Urban Plan of 2014. This perimeter (Figure 1b) is consistent with the methodology proposed by Bertolini and Spit (1998), being coherent with the *urban context in the coordination of urban references*, and also with that proposed by Carmona (2014), establishing those elements which *clearly unify Place*. That means, the area is delimited by the streets Av. das Nações Unidas (Pinheiros expressway), rua Butantã, rua Teodoro Sampaio, rua Cunha Cago, Baltazar Carrasco and rua Sumidouro.

Pinheiros, located on the west side of São Paulo, is one of the oldest neighbourhoods in the city. Chronologically, the main interventions in the area were *[P0]*: 1910 inauguration of Pinheiros Market; 1920 start of straightening

Figure 1 – a) Perimeter of area studied and names of main streets; b) aerial mage with overlaid perimeters and 500m buffer zones surrounding Pinheiros and Faria Lima stations, respectively



Source: PMSP (2015); Baiardi (2018).

course of Pinheiros River; 1927 setting up of Cooperativa Agrícola de Cotia (CAC – Farming Cooperative); 1944 finish of straightening course of River; 1957 inauguration of Pinheiros train station; 1968 widening of Av. Brig. Faria Lima; since 1970, Largo da Batata became a Place where the functions of a junction concentrating roadways, bus station and high volume of pedestrian traffic predominated; 1994 CAC wound up its activities; 1995/2004, Faria Lima Urban Operation (before and after the Statute of the City); 2001 national tender promoted by the city authorities and the Brazilian Institute of Architects (IAB) for devising the project "Urban Reconversion of Largo da Batata"; 2008 start of building works on Largo da Batata based on "reconversion" project; 2010 inauguration of Faria Lima subway station by São Paulo State government; 2011 conclusion of work on Pinheiros subway station; 2012 completion of works on Largo da Batata; 2014 new Municipality Urban Plan; 2022 inauguration of private corporate tower – Faria Lima Plaza – on former CAC site.

Owing to its strategic position in the city, Largo da Batata became consolidated as a center of intense traffic of both private and public transport and an informal trade hub. Data from the IBGE (Brazilian Institute of Geography and Statistics) (2010) indicates that the sub-prefecture of Pinheiros is home to 2.6% of the population of São Paulo city, or some 290,000 inhabitants. Yet, in terms of job generation, the region accounts for 27.7% of jobs offered in the city and has the highest HDI. In Pinheiros district, 11.8% of the population earns over 10 minimum wages, while 54.5% receive 1-3 minimum wages.[5]

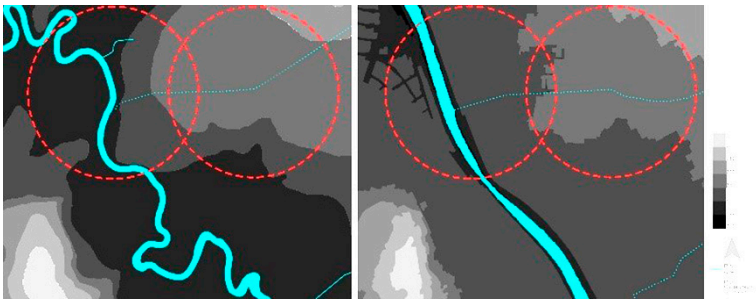
Given that the objective of this study was to analyze the spatial dilemmas between Node and Place, data pertaining to Mobility in the area are not discussed, a topic (among others) addressed in Baiardi (2018). Summaries of the analyses of the categories of Urban and Transport, together with their respective design codes in the Pinheiros and Faria Lima Station areas on meso (intermediate) and micro scales, are given in the charts below.

Chart 3 – Summary of spatial analyses between urban and transport categories on intermediate scale

	CAT	Codes	Dilemmas and challenges in station area
Intermdiate Scale > Station Area	Urban	Conditioning factors and/or structuring elements of urban fabric + roadway system [P1 + NO] [design of streets and blocks]	**[P1] Pinheiros + Faria Lima**: Mediating factor Pinheiros River; straightened and made into an urban barrier over the years, notably with implementation of the freeway Av. das Nações Unidas, informally referred to as the "Pinheiros River expressway". Floodplain zone (Figure 2). **[N0] Pinheiros + Faria Lima**: Depicting importance of colonial route of Butantã street ("S" shape) – only point this crosses the river – and intersection with Largo da Batata where it branches into the streets Cardeal Arcoverde, Teodoro Sampaio and dos Pinheiros. The 1974 map shows the inclusion of a new structuring element: the widening of Av. Brig. Faria Lima in 1968. The area prominently features the North-South stretches of the expressway (Marginal Pinheiros) and Av Brig. Faria Lima (trunk road). Between these lies the binary crossings of the streets Sumidouro and Paes Leme, featuring wide irregularly--shaped block design juxtaposed with flood zones. After Largo da Batata, bearing east, the (funnels) Teodoro Sampaio and Cardeal Arcoverde and regular block design is evident (Figure 3a). As a result of the "Urban reconversion" project (2001) [I5], the design of Largo da Batata changed radically, and new roads were laid and others widened in the area under study. For further details see Baiardi, 2022. (Figure 4)
		Occupation and types [P2] [design of existing landplots – buildings]	**Pinheiros and Faria Lima**: In the 1930s, there was significant occupation, most notably the buildings on rua Butantã. In the 1970s, the area was essentially fully occupied, largely by small houses and 2-story buildings (more toward Faria Lima station) and some warehouse buildings selling a range of building materials and markets (more toward Pinheiros station in older areas vulnerable to flooding). There were many active façades and buildings along this trajectory (Figure 3b). Pinheiros district is currently undergoing a significant process of transformation with the replacement of the old landscape of 2-storey buildings and warehouses by large residential tower blocks or monofunctional services without active façades. Main points of reference: Nossa Senhora de Monte Serrat church, Pinheiros Market, CREA-SP, Sesc Pinheiros, Faria Lima Plaza building
	Transport	Transport systems Train [N1] + subway [N2] lines + bus [N3] + cycle paths/lanes [N4]	**Pinheiros + Faria Lima** (Figure 5): **[N1]** Line-9 emerald (only at Pinheiros station) Owned by CPTM; in 2022 leased for 30 years to ViaMobilidade; **[N2]** Line - 4 yellow (Leased to ViaQuatro shortly after construction in 2006); **[N3]** "Pinheiros" bus terminal + Bus lanes: Av. Faria Lima, rua Teodoro Sampaio, rua Cardeal Arcoverde, rua Butantã; section of rua Paes Leme; **[N4]** Av. Faria Lima; rua Arthur de Azevedo; Pinheiros river cycle path
	Instrument	Masterplan [I1]; Zoning [I2]; Regional Plans [I3]; Urban Operation [I4]; Local Masterplan [I5]; Others [I6]	**Pinheiros and Faria Lima:** most notably **[I4]** *Operação Urbana Consorciada* Faria Lima and **[I5]** Project entitled "Reconversion of Largo da Batata" promoted by the city government (Figure 4). The tender terms (2001) stipulated 4 fundamental premises: 1. Construction of Faria Lima subway station; 2 Resizing, reorganization and relocation of existing Largo da Batata bus terminal to new site nearer Pinheiros river; 3. Building of transfer space at Largo da Batata; 4. Connection of street rua Baltazar Carrasco with Rua Sumidouro.

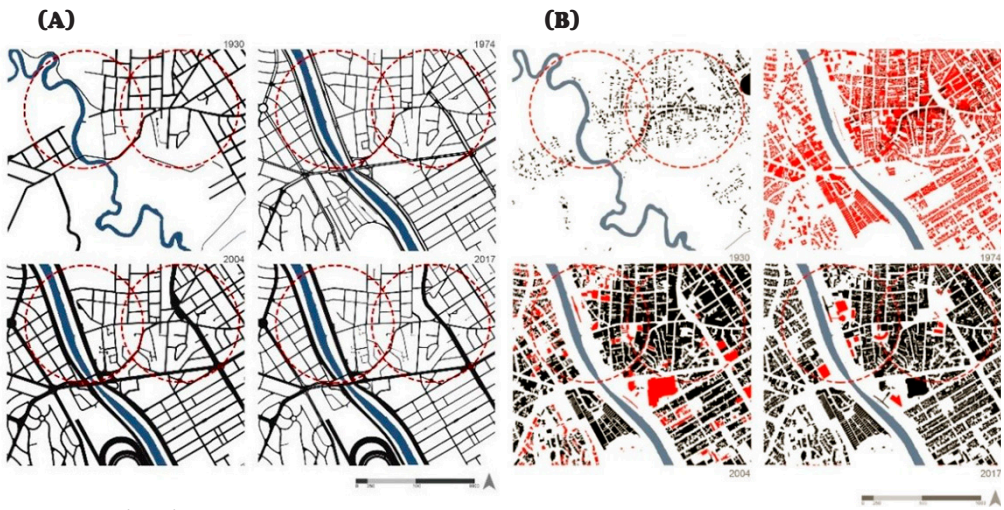
Source: prepared by the authors based on Baiardi (2018).

Figure 2: [P1] Natural mediating elements
in Pinheiros and Faria Lima station area



Source: Baiardi (2018).

Figure 3 : [P2] a) Urban fabric in Pinheiros and Faria Lima station areas
in 1930, 1974, 2004 and 2017, respectively;
b) Pattern of occupation of Pinheiros and Faria Lima station areas
in 1930, 1974, 2004 and 2017

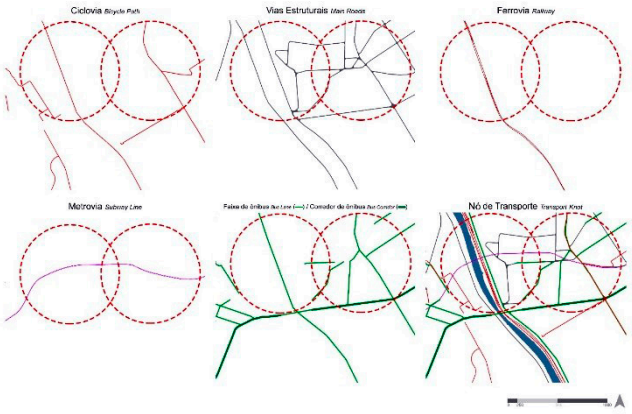


Fonte: Baiardi (2018).

Figure 4 – [I5] General Intervention Plan proposed by winning project of tender for "Urban reconversion of Largo da Batata" project, in 2002

Source: Frascino, Waisman e Feriancic (2013).

Figure 5 – [N4-N0-N1-N2-N3]
Transport systems in Pinheiros and Faria Lima stations areas, respectively: cycle paths; expressways, main roads, traffic funnels; railway; subway; bus corridors and lanes; and transport Node structure incorporating all these systems



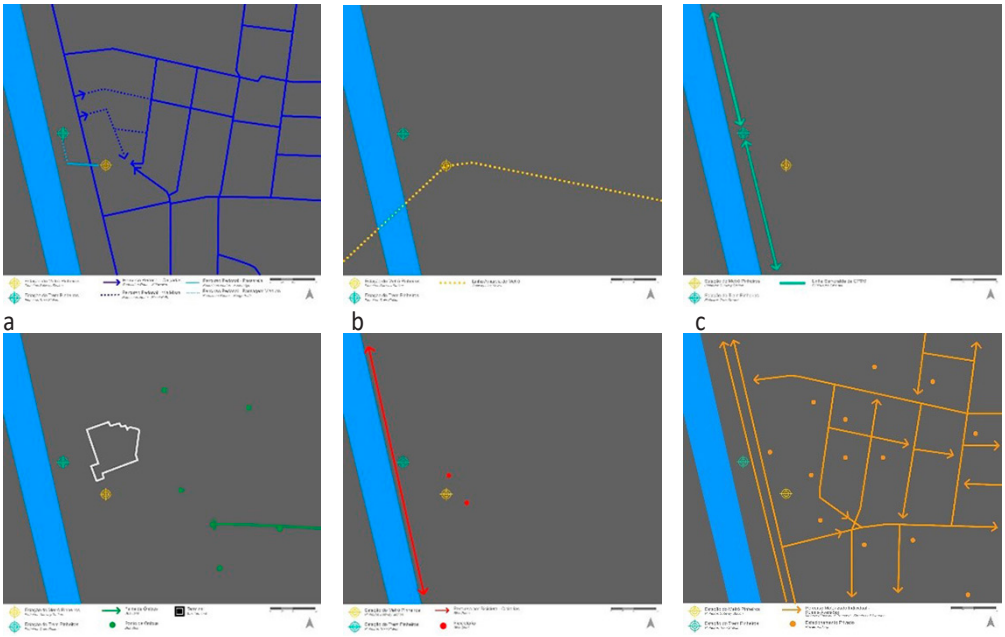
Source: PMSP, MDC 2015, in Baiardi (2018).

Chart 4 – Summary of Spatial analyses of urban and transport categories on local scale

	CAT	Code	Dilemmas and e challenges in Station Areas
Local Scale > Station Scale / Building	Node	Microaccessibility [N6] pedestrian + [N7] subway + [N8] train + [N9] bus + [N10] bicycle + [N11] motor vehicle	**Pinheiros (Figures 6 and 7)**: **[N6]** There are 2 points of entry from the same street. This entry is via a small square bounded by fences, planters and a bicycle parking station. There is a narrow sidewalk providing access from the street rua Capri (main flow), since no sidewalk exists along the curbing of rua Gilberto Sabino on the station/terminal side. There is no direct access from the Pinheiros expressway. The roadways are to be narrowed in order to increase the flow of motor vehicles as is the case on the street rua Sumidouro (Figure 8a). **[N7]** After passing the barriers in the subway station placed just inside the entrance, users must go down several flights of traditional stairs and/or escalators, normally with a high flow of passengers, to access the subway platform. There are conflicting flows on the ground floor. **[N8]** After entering the subway stations, users may encounter flows of subway users. Passengers must climb stairs (Figure 8b), cross the freeway by footbridge, go down more steps to finally access the train platform. The old train footbridge was not reused, although is still in place at the site and would provide direct access to the bus terminal. **[N9]** The connection between the subway station and bus terminal occurs from the side at ground level, by going through narrow poorly-designed spaces given the importance of the link between subway station and terminal (Figure 8c). Passengers are obliged to go through a turnstile on approaching the terminal. Terminal access is through a doorway via the freeway or an entrance on rua Gilberto Sabino. Regarding bus stops, there is one located in front of Pinheiros station. **[N10]** Two small bicycle parking stations (one managed by ViaQuatro – rail provider –located at the station entrance) and another provided by SPTrans, located between station and terminal). **[N11]** 1) There are no Bays for safe drop-off/pick-up; 2) There are no public parking lots and/or integrated public transport; 3) Private parking facilities: a lot is located on the basement floor of Pinheiros terminal and several others can be found in the vicinity; 4 curbside Blue Zone metered parking areas in the vicinity. **Faria Lima** (Figures 9 and 10): **[N6]** Two options for accessing the station (Figure 10). 1) Largo da Batata with single entry point, obliging those coming from inside the square to go around the block, passing through residual void areas between blocks, or head on to the corner of Av. Faria Lima and access the sole point of access to the station. 2) Access via the residual entrance on rua Teodoro because of the confined space with neighboring land plot, further hampered by the presence of newsstand, or access via Av. Faria Lima, again obstructed by the presence of another newsstand. **[N7]** Upon entering the station via the "ground floor level", users immediately descend to the basement via traditional stairways and/or escalators (Figure 8b), pass through a tunnel which then leads to the barriers across the other side of the station under Largo da Batata. **[N9]** With regarding to bus stops, these are located on both sides of Av. Faria Lima alongside the station. However, although there may by stops on the same side of the road, buses may only stop at certain stops depending on their final destination. **[N10]** 1) a bicycle parking station located at Largo da Batata. 2) Rental bicycles at the other side of the Square facing Av. Faria Lima **[N11]** 1) bays for safe pick-up and drop-off: not available; 2) Public parking lots and or integrated public transport: not available; 3) Private parking facilities: many in the vicinity; 4 curbside Blue-Zone metered parking spots in the vicinity.
	Place	Buildings [P3] [minimum element]	**Pinheiros:** (Figure 7) In the subway station, the shape is mainly circular and building mostly glazed. The train station is located immediately alongside the River and it is essentially a covered space of the platform featuring "formal" interventions with the addition of "new" ones, without formal identity between them and certainly not in common with the other train stations implemented years earlier on Line-9. No nodal point was created, a "reference" station along the expressway. The bus station is covered with a cable-stayed roof, designed by a private company, not in keeping with the subway or train stations. **Faria Lima**: Two insertions. On Largo da Batata there are 3 circular glazed buildings, one of which is used for access and the others dedicated to the ventilation of the subterranean levels. On the other side of the street, there is a single rectangular block with two rounded sides with no setback to rua Teodoro Sampaio, but a significant setback to Av. Faria Lima. In both cases the project was executed by the Subway; there is no active façade and use is solely as transport Node (Figure 10). Examining the proposals of the winning "Urban reconversion" project, the Faria Lima station area was the "focus" and the design referred to an "Esplanade", as a multi-use iconic commercial building was originally to be erected in the expropriated area. No commercial building was ever built at the site, but a private corporate tower block (Faria Lima Plaza) constructed with no public use at ground level and surrounded by grid fencing.
		Urban Design [I7] + Local territory [P4] [on the ground]	**Pinheiros:** The design of the block where the Node was implemented – at the subway+train stations+ bus terminal – was not changed (Figure 3a + 3b). The subway station façade is setback on rua Capri (creating a small square) and the others are fenced off, particularly on the side facing the freeway (Figure 7). There is no formal integration with the bus terminal and barriers/turnstiles are installed between the terminal and station with poorly-planned spaces and accesses. The winning project for "Urban Reconversion" project referred to the Terminal area as Indirect, and not a major focus of the project, which instead centered on Largo da Batata. **Faria Lima**: The space derived from the "Urban reconversion" project after a number of expropriations, resulted in a new configuration of a "dry" square. After much public pressure, this was equipped with furniture and landscaped. The "landplots" where the blocks of the subway station are located are unidentified. The blocks are located haphazardly within the space, having no formal qualitative relationship (on one side – Largo da Batata – circular blocks; on the other, the Tower side, a single "rectangular" block. Significant urban residual voids are formed in the areas proximal to the stations. Rigid insertions. Non-valorizing of the Market (Figures 11).

Source: prepared by the authors based on Baiardi (2018).

Figure 6 – [N6+N7+N8+N9+N10+N11]
Diagrams of Pinheiros, where green marker denotes train station and yellow marker subway station: a) pedestrian microaccessibility; b) location of subway line and station; c) location of train line and station; d) bus lanes, stops and terminal; d) cycle paths and bike parking stations; e) private parking and access streets



a b c d e f

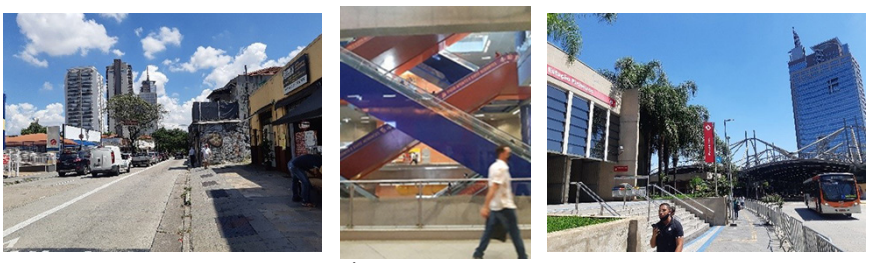
Fonte: Baiardi (2018).

Figure 7 – [P3+P4 + I7]
a) Pinheiros subway station and its “access square”; b) Pinheiros train station/platform in background, with freeway in center and old access footbridge within bus terminal; c) Bus terminal and its lack of relation with the street rua Gilberto Sabino (lacking sidewalk)

a b c

Source: Baiardi (2022).

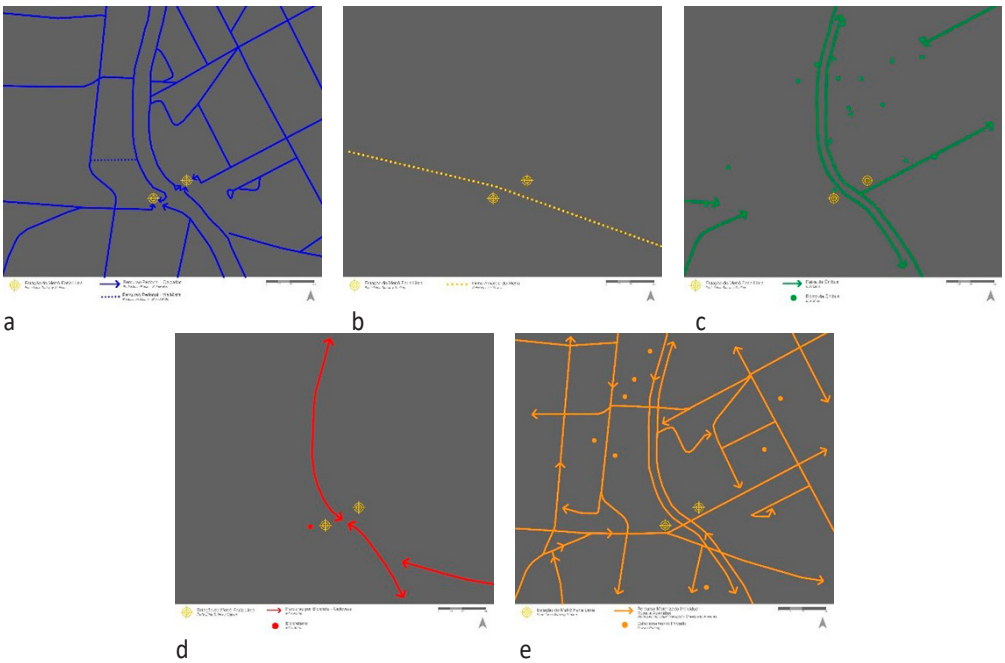
Figure 8 – Widening of rua Sumidouro leading to a narrow sidewalk;
b) several flights of stairs to access the subway platform and clash of flow
on ground level between users of subway and train; c) connection between
station and terminal, lacking architectural language, at ground level along narrow sidewalks



a b c

Source: Baiardi (2022).

Figure 9 – [N6+N7+N9+N10+N11]
Diagrams of Faria Lima, with yellow markers indicating subway stations. RHS of diagram,
building located beside rua Teodoro Sampaio/Faria Lima Plaza; to LHS, building
situated on Largo da Batata: a) pedestrian microaccessibility; b) location of subway line
and station; c) bus lanes and stops; d) cycle paths and bike parking station;
e) private parking and access streets



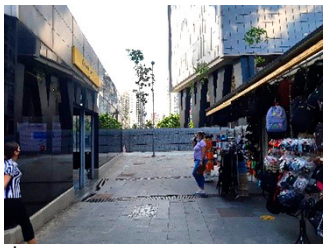
a b c

d e

Source: Baiardi (2018).

Figure 10 – [P3 + P4 + I7]
Two options for accessing Faria Lima subway station: a) single access from Largo da Batata; b) and c) access from opposite side of Square, where b allows passenger entry from Rua Teodoro Sampaio and c) from Av. Faria Lima


a

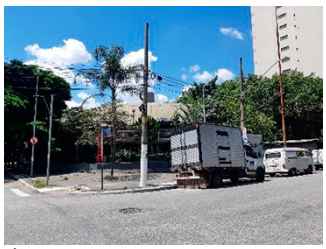

b


c

Source: Baiardi (2022).

Figure 11 - [P4 + I7]
a) Large open spaces in area of Largo da Batata, largely the result of the Urban Reconversion Project, equipped with furniture following public pressure; b) non-valorizing of Pinheiros Market; c) residual voids between station blocks and, in background, the Faria Lima Plaza building, where Esplanade was planned but never implemented by the authorities


a


b


c

Source: Baiardi (2022).

Results and discussion

The promotion of a form of mobility that stimulates public transport and non-motorized modes of transportation is an instrument which helps foster a more inclusive, diverse, sustainable and democratic city, where all modes should be treated equality. Only through *multiplicity of use of modes* of transport and by *expanding and improving connections* can the growing demands for urban mobility in our cities be effectively fulfilled (Baiardi, 2012).

To this end, it is crucial to ensure the circulation and mobility of people via the swift identification of routes and trajectories, as well as to provide microaccessibility in the areas surrounding key public equipment. It is also important to *review the paradigms of urban design*, adapting them to focus on environmental aspects and valorizing the landscape by *better equipping spaces*, restoring the conditions needed to promote their appropriation as Place.

As illustrated by the case studies, the space of the Faria Lima Station area is a Place within a historic, consolidated urban fabric with a strong regional identity – the Largo da Batata. By contrast, Pinheiros was a large empty land plot whose relationship with the river had been eroded over decades. The train line and station continue to be "expressed" between the River and expressway. With the building of the subway stations, the role of these mediating factors becomes evident, shunning any relationship with the opposite bank of the river and city[6] [P0].

The Pinheiros Station area has a high modal intensity [N1-N2-N3-N4] which repercusses on pedestrian flows exhibiting conflicts of use where, in many cases, the space for passage is restricted and inadequate. The design of the block [P1] went unchanged, with a failure to build fluid connections between the new stations, terminal and the surrounding area, i.e. a missed opportunity for new urban form featuring new routes and *spatial layouts between the urban structures and open spaces*.

The Faria Lima Station area, however, underwent major spatial transformation [P1] as part of the "Largo da Batata Urban Reconversion" project. In terms of specific urban instruments [I6], Baiardi (2022) notes that, although the "project" was the main morphological instrument applied in the Areas of the Stations, the intervention lacked a broader vision encompassing physical and formal coordination [I5] between the elements of infrastructure, road system and system of public spaces.

According to Baiardi (2018; 2022), not even the presence of an Urban Operation[7] [I4] which acts on large areas, or a "project", proved capable of promoting "urban development". In fact, the funds "raised" by the Urban Operation led to erosion of the territory through extensive expropriation; the inclusion of closed public equipment, without permeability, and expansion of construction potential "within" the landplots.

Ironically, the Pinheiros Station Area was precisely a "free square" where many of these relations could have occurred between public agents involved in the conception of the new subway/train/stations and bus terminal. However, this area was only indirectly considered in the "reconversion" project. The main area, Largo da Batata square, become an empty expanse following the numerous

expropriations, associated with the modernist notion of an "Esplanade" which instead became a "Plaza" through the inauguration of a corporate tower block erected in 2022, with no relation with Faria Lima station or a public space surrounding it, fenced off by railings encircling the building.

Thus, the Square became yet another homogenized territory on the Avenida Faria Lima trajectory. Even the name of the "new " station, called "Faria Lima" completely ignored the former historical site – Largo da Batata – now fully "reconverted" as a faceless symbolically eroded location. The territory has undergone extensive typological transformation with the demolishing of houses, warehouses, only to be replaced by large monofunctional tower blocks for residential or commercial use [P2].

Interestingly, in the "urban" design plan executed ([I6] – Figure 4), the Faria Lima subway does not feature in the Largo da Batata, whilst Pinheiros station appears "tucked away in its corner", as does the bus terminal. In both cases, the microaccessibility, intermodality, as well as formal and spatial connections between buildings, is poorly conceived [N6-N7-N8-N9-N10]. Contradictorily, the road interventions [N11] in the area predominate, exemplified by the building of large private garage in the basement of the bus terminal with loss of the sidewalk, expropriations to make way for roads, and widening of some streets with a deleterious impact on sidewalks.

From an architectural design standpoint [P3], the functionalist agenda again dominates, with segregation of programs within and outside the buildings: access is provided solely to a Transport Node and nothing else. No overarching architectural scheme encompassing the subway-train-bus terminal buildings was considered – all public agents despite pertaining to different spheres. Swift passage was made the priority.

Polyvalent uses and forms were not employed, particularly in the Pinheiros station area, which lent itself to the creation of either a node point in the landscape and/or public equipment or introduction of a new design paradigm for an intermodal station. Instead, a circular block which vanishes in "obscurity" with the cable-stayed roofing of the Terminal installed immediately alongside it, with poor access in the hitherto empty "land plot" [P4].

However, incorporating new elements in the Faria Station Area proved challenging given the complexity of the territory and that it had previously been the focus of major expropriation and redesign of roadways [P4]. Nonetheless, the fact remains that the part facing rua Teodoro Sampaio/ "Plaza" Tower received no formal valorization [P3] or attention to flows or the landscape. Indeed, the station building became "obscured" by the changes made to the urban space, more specifically, the construction of the corporate tower block, previously earmarked to be an "esplanade" in the "reconversion" project. With respect to the 3 volumes built in the Largo da Batata portion [P3], the urban redundant voids created between them are lamentable. Ironically, this open space called the "Largo" (Square), is a space that has been undergoing major change in use since its aseptic beginnings (devoid of trees or public equipment), but has slowly regained plurality through appropriation by all users; a Place where *the station is not the protagonist of the space.*

Hence, from an urban perspective, there is no synergy of the Transport Nodes with the Place; whose buildings, in the role of key public

equipment, should have the main function of attracting, convening and serving as facilitators for both microaccessibility and structuring of a new "territory" with the implementation of the new Nodes.

In the Station Areas studied, there is a predominance of spaces conceived as Non--Places, incorporated into the landscape merely to encourage quick passage. Navigating these fragmented interventions is hard work, as they are not designed to provide unity, coherence or spatial continuity. Paradoxically, there is a lack of qualitative dialogue of the stations with the local territory.

This exacerbated ambivalence between Node and Place occurs, among other reasons, because of the absence of a coordinating urban design; of a Masterplan, an overarching framework connecting the different projects, urban scales and agents (Baiardi, 2018). This exposes the lack of a design plan to promote not only new uses but also densification that is integrated with the local territory; which affords new opportunities for design, connections and, above all, improvements both in the form of urban mobility and a new urban design, i.e. one which coordinates interaction of Node and Place.

Therefore, it is paramount to consider not only a technological future of major infrastructure, but a sensitive future in which the senses play a greater role, such as hearing, feeling, seeing and speaking by the people that frequent Places. Only by identifying where these emerge, and the gap between implementation of urban policies and urban design plans in producing spaces at a local scale, will it be possible to understand where exactly the problem lies, its root causes, how it can be tackled and, ultimately, overcome.

Final considerations

The objective of the present study was to analyze the spatial transformations in the Pinheiros and Faria Lima Station areas, on both meso (intermediate) and micro (local) scales, and further the debate on the spatial dilemmas between Node and Place. This investigation explores the ambivalence inherent to Station Areas as a source of conflict, but also as an opportunity for urban (re)development and/or restructuring of a territory.

Analysis of the spatial evidence using design codes drawn from a host of projects by national, state and city public authorities, as well as private enterprises, reveals that the spatial dilemmas between Node and Place have not been overcome in Station Areas, but exacerbated. The results also suggest that guidelines and goals of a specific Macro Plan or Tender alone are insufficient to appreciate the design challenges on meso and local scales. The results also revealed the lack of a Masterplan during the process of intense spatial transformation that could serve to override functionalist and sectoral views. In the current case, these views limited the intervention to the interior of the land plot, to a single item of infrastructure and a "reconversion", all of which ignored the territory in which they were implemented.

Elucidating how the structuring elements of the urban form of Place interact with Transport Nodes is vital in developing contemporary cities. The historian Eric Hobsbawm (1995, p. 562) warned that, if we choose to build a new millennium repeating the mistakes of the past and keeping the same patterns of society, we are doomed to failure and a fate of darkness. Public transport can only be brought to São Paulo city to the same level as other modes of transport by making it efficient, habitable and comfortable. Therefore, the recognition that Transport Nodes are key to the structuring of the place they are located, particularly considering the public space as an organizing element which strengthens the connection between man and Place, will represent a major stride for the territories of our Metropolis.

[I] https://orcid.org/0000-0002-1185-4939
Universidade Federal de Pernambuco, Centro de Artes e Comunicação, Departamento de Arquitetura e Urbanismo. Recife, PE/Brasil.
yara.baiardi@ufpe.br

[II] https://orcid.org/0000-0001-7538-2136
Universidade Presbiteriana Mackenzie, Faculdade de Arquitetura e Urbanismo, Programa de Pós-Graduação em Arquitetura e Urbanismo. São Paulo, SP/Brasil.
angelica.benatti.alvim@gmail.com

[III] https://orcid.org/0000-0001-7167-6022
Leibniz University Hannover, Territorial Design and Urban Planning. Hannover, Alemanha.
schroeder@staedtebau.uni-hannover.de

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Notes

(1) Article based on the thesis by Y. C. L. Baiardi, entitled *Transport node and place: dilemmas, challenges and potential for the development of an Urban Mobility Hub*, defended at Mackenzie Presbyterian University and Leibniz Universität Hannover, 2018, under the supervision of Angélica Benatti Alvim (UPM) and Jörg Schröder (LUH).

(2) Microaccessibility is defined as the issue associated with accessibility when access to a given space occurs on an urban microscale. For further details, see Baiardi (2014, 2012).

(3) Cartesian because method entails separating parts based on verification for independent synthesis, analysis and numbering, precluding an overall view.

(4) Maps consulted were: General Plan of São Paulo City (1897), Topographic Map of the City of São Paulo produced by the company Sarah Brasil S/A (1933); Topographic Maps of the City of São Paulo, produced by the Executive Group of Grande São Paulo - Gregran (1974), and the São Paulo City Digital Database (2004 and 2015) used to produce the diagrams.

(5) Given the purpose of this article, we will not discuss data on mobility in the area, which, among other topics, is discussed in depth by Baiardi (2018).

(6) The alternative for pedestrians would be the Eusébio Matoso bridge or Bernardo Goldfarb bridge, situated alongside one another approximately 800 meters south of Pinheiros station. The only way to cross over the Pinheiros river using a subway station is at Santo Amaro station in the south, some 13km away, by purchasing a ticket. See more in Baiardi, 2012.

(7) See more in Mascarenhas, 2014.

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