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City Street⁵ The time of streets: incisions, overlaps and rhythms Book of Proceedings

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Book of Proceedings

INCISIONS OVERLAPS AND RHYTHMS

the time of streets



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INTRODUCTION

The Time of Streets: Incisions, overlaps and rhythms

The fifth edition of the City Street International Conference follows in the footsteps of the previous editions organized in Beirut by the Ramez G. Chagoury Faculty of Architecture, Arts and Design at Notre Dame University-Louaize, and in Ljubljana, virtually, by the Faculty of Architecture at the University of Ljubljana along with the Urban Planning Institute of the Republic of Slovenia.

This time in Lisbon, City Street 5 was organized by the Lisbon School of Architecture, Universidade de Lisboa, with the support of the CIAUD (Research Centre for Architecture, Urbanism and Design) and the AEAULP (Academy of Architecture and Urbanism Schools of Portuguese Language); and was hosted at the Calouste Gulbenkian Foundation. Hosting the venue in one of the most significative examples of Portuguese modern post-war architecture, at the intersection and overlap of streets from different times, was a conscient choice to frame the debate on the time of streets in the most adequate setting.

Two keynotes framed the works of the conference: the opening of the first day counted with "Lisboa" by João Luís Carrilho da Graça, introducing the hosting city from a personal perspective of one of the most significant architects with a recognized body of works in the Portuguese capital; and the last day closed with "Streets: agents of the Transition" by Paola Viganò, sharing a knowledgeable insight on the role of streets in the evolution and transformation of the urban organism, formed by the vast academical and professional experience in urban, landscape projects and public spaces in Europe.

The conference works counted with a roundtable with the moderation of Nuno Mateus which gathered a diversified panel of speakers: architect-artist-illustrator Ana Aragão, landscape architect João Nunes, economist-urbanist-geographer João Seixas and architect Lucinda Correia, who discussed about the "rhythms" of streets.

The second day of the conference counted with the Lisbon walking workshops that certainly will be kept in the memory of all participants ["WALK 1 - walking along tram 28 tracks", accompanied by Jorge Mealha; "WALK 2 - walking and drawing", accompanied by Pedro Janeiro; and "WALK 3, walking the hills and valleys", accompanied by Carlos Dias Coelho] with the previous introductory talk on the "Names and Form of Lisbon streets" by Sérgio Barreiros Proença.

The street, as a public space, defines both common and exceptional elements of the city's urban layout. The various declinations of forms, names and meanings of streets reflect different geographies and cultures that nevertheless share common characteristics.

Street, in Portuguese, is translated with the word *rua*. According to the first dictionary of the Portuguese language (Bluteau, 1712–1728), *rua* derives from the Greek *ruo* with the same meaning as the Latin *flŭo*: a stream of water "because through the streets runs the rainwater, that falls from the roofs (...) also the people run the streets, and each one of them is a stream of people (...)." Bluteau finally refers that some etymologists state that the word *rua* has the same Latin root as the word *ruga*, which means wrinkle: "a line, or a groove, caused by the time". *Rua* therefore congregates the notions of motion and line, in a single word.

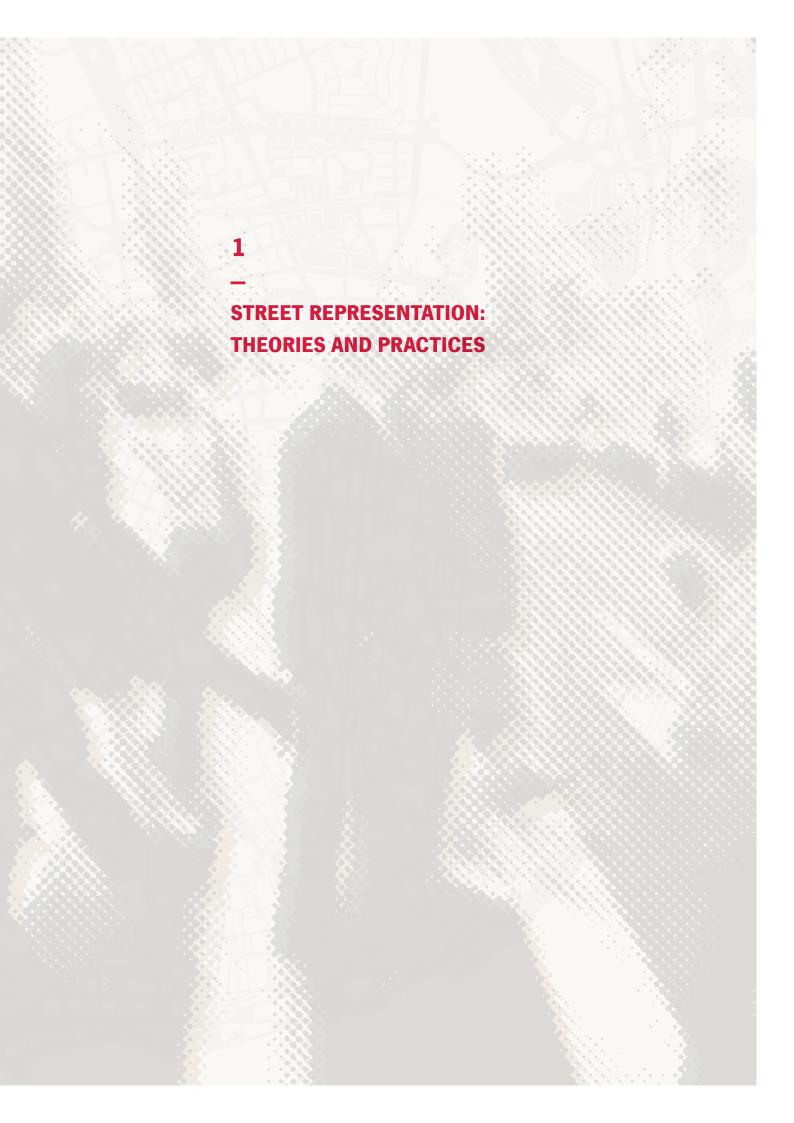
Recognising the street as a line produced by the effects of time on the

skin of the city, as a wrinkle testify the passage of years, frames City Street 5– The Time of Streets: Incisions, overlaps and rhythms. Streets are the physical repository of the polis memory, an urban object in transformation over time, resulting from social and political evolutions that shape the form of the city, the urbs. Reading the incisions and the overlaps of time in the urban fabric, allows us to decode the polis eventum, which have contributed to form the present stratum urbanum. Understanding the cycles and rhythms that sculpt the wrinkles of the city, remains essential to imagine and design the future of streets. Under this common theme, City Street 5 welcomed proposals from different contexts, methodological approaches, and disciplinary fields, that relate to the timeless importance of streets on the construction of the city as a framework for human life. From more than one hundred and twenty submissions, a selection of 60 papers, from authors of 23 different countries participated in the conference, distributed by the six tracks that also structure this book of proceedings: Track 1, STREET REPRESENTATION: theories and practices; Track 2 STREET MOBILITY: current and future trends; Track 3 ON STREETS: research tools and methodologies; Track 4 THE LIFE OF STREET: collective memories and multiple rhythms; Track 5 STREET ADAPTATION: urban transformations and (a)temporal needs; Track 6 THE FORM OF STREETS: interpreting and designing.

We hope you share our common interest and passion for cities and streets as you read these pages.

The organising committee.





Imago or Forma Urbis? The representation of the street by the sea

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Abstract

The city is an artefact, an unfinished object, which is constantly changing in space. The overlapping of different urban elements over time requires that the interpretation of the urban form takes place through processes of abstraction that allow the reading of it beyond the imago urbis. In order to research the urban form underlying the image of cities, in this research we have utilised drawing as a scientific method through which to prove the outlined hypothesis. The hypothesis is that the urban relationship of coastal cities with the sea was transformed with the introduction, in the 20th century, of the urban element parallel to the water line, the street by the sea. The methodology outlined is based on a complementary double-blind approach in which the authors, through two different types of drawing, freehand and technical drawing, achieve comparable results. Proving the role of drawing in the search and decoding of the form underlying the image. In conclusion, we can affirm, that the drawing allows decoding urban form related to the imago of the streets by the sea, a critical operation for urban and architectural composition. Nowadays it is necessary to redesign the form of coastal cities and their relationship with the sea, in order to adapt the street by the sea to the effects of the rise in the average sea level. Transformation achieved through an operational reading of urban form, dynamic over time, and by avoiding the immobility that characterises the imago urbis.

Keywords

Drawing; Imago Urbis; Forma Urbis; Coastal Cities; Street by the sea.

Introduction

Street by the sea, the urban space between the sea and the city, represents nowadays the *imago* of coastal cities, the stereotypical postcard image. However, until before the 20th century, the urban space by the sea was a place frequented by the poorer social classes - fishermen and merchants - a place dedicated to the exchange and processing of goods transported by ships. From the second half of the 18th century with the affirmation of the Grand Tour, the culture of the sea, or as Corbin¹ (1990) defines it "the invention of the sea," developed, promoting the urban transformation of coastal cities. The change in the social paradigm supported urban transformation: port infrastructures were demolished and rebuilt further away from the city centre, replaced by ramps leading to the beach and belvederes for observing the sea. Since the end of the Second World War, the phenomenon of mass tourism, due to economic development and the car as a commodity accessible to all, coastal agglomerations have been transformed to accommodate the new urban functions demanded by tourism.

The relationship with the sea has contributed to the definition of the urban form of coastal cities. Over time, human action has shaped the natural environment, transforming the territory into an ideal land-scape for the development of coastal settlements. The successive transformations that have taken place in the urban landscape have been superimposed in different layers and substrata that have made the reading of the urban form complex. Among the most significant urban transformations is the introduction of the street by the sea.

The hypothesis underlying the research, presented in the article, is that the primordial urban relationship of coastal cities was interrupted by the construction of the street by the sea as an urban limit that develops parallel to the water line. The research hypothesis is verified through the qualitative methodology developed, in which through a complementary double-blind approach the two authors independently reached comparable results. The methodology is based on the use of two different drawing techniques, freehand and technical drawing

¹ Corbin, A. L'invenzione del mare. Riti e culture. Venezia, Italia: Marsilio, 1990.

(developed on the basis of the scientific rules of urban morphology), to decode the urban form of the two chosen cases, Cascais and Sesimbra, coastal towns in the Lisbon metropolitan area.

In conclusion, we consider that drawing allows the search for the urban form underlying the *imago*, an action necessary to implement operational processes of urban and architectural composition. Indeed, Braudel, in the text *Les Mémoires de la Méditerranée*,² urges the reader to observe coastal landscapes over and over again, until physical and urban characteristics are eloquently revealed and named.

Coastal cities

Coast from the Latin *costa*, it takes on a polysemic character in the Romance languages, passing from the anatomical meaning to that of the back of a book, the rib of a leaf, of a dome or of the outer planking of ships, a steep mountain section but also the limit between the land and the sea.

Over time, the coastal landscape has undergone various processes of anthropic transformation that have transformed the space between the land and the sea into a privileged place for the development of urban agglomerations. Indeed, coastal areas have always attracted human beings, whether for their wealth of resources, for logistical reasons, for recreational or cultural activities, or simply for their particular sense of place as the interface between land and sea.

European coastal settlements were, until the 19th century, mainly agglomerations of fishermen's houses. The sandy low beach, on which the buildings were constructed, was also the site of fishing activities, where boats were housed, nets were laid out and fish were traded. In the 19th century, with the first industrial development, the concept of elite tourism took shape along the European coasts, through small urban interventions on the territory, such as sanatoriums and hotels overlooking the sea, for the accommodation of the upper middle class. Although the buildings were located in isolated areas, over time they were integrated into the urban form of the nearest city, promoting urbanisation processes.

² Braudel, F. Les Mémoires de la Méditerranée. Paris, France: Édition de Fallois, 1998.

After the Second World War, as a result of the economic boom, urban reconstruction, and the introduction of the car as a commodity affordable to all, the social phenomenon of mass tourism emerged along European coastal areas³ Different infrastructure systems, such as roads and highways, begin to be built in the coastal landscape, encouraging the formation of new urban agglomerations and the development of existing settlements. The urban growth of coastal settlements began in the 1950s, in response to the growing demand of the tourist market, justified by the desire to exploit the sea and the beach as areas of leisure and entertainment. In urban areas close to the water line, old fishermen's houses are demolished, and houses, hotels and tourist facilities are built. On the low, sandy beach the boats and nets of the fishermen were replaced by bathing systems and infrastructure, such as bathing establishments. With the urban transformation of the coastal city, a new paradigm of urban space parallel to the sea was imagined, and in those years the street by the sea became the image of the coastal city. Consecrating the role of architecture in the construction of the tourist iconography of coastal cities4.

The Street by the sea

Nowadays, the street by the sea is an urban element that develops longitudinally to the shore areas. Urban public space bounded on one side by a homogeneous built front, composed of buildings mainly dedicated to tourism, and on the opposite side open to the sea⁵.

Architectural historian Paolo Sica stated in 1977 that the seaside promenades were, due to their formal characteristics, one of the "happiest" places in nineteenth-century town planning. Indeed, from the second half of the 18th century with the affirmation of the Grand Tour, the culture of the sea developed, or as defined by Corbin (1990) "the

³ Neumann, B.; Vafeidis, A. T.; Zimmermann, J.; Nicholls, R. J.. Future Coastal Population Growth and Exposure to Sea-Level Rise and Coastal Flooding. A Global Assessment. *PLoS ONE*, 2015, 10(3): e0118571.

⁴ Lobo, S. Architecture and Tourism. Anatomy of a Souvenir.in international scientific conference Cultural Heritage. Possibilities for spatial and economic development, Nakladnik, 201

⁵ Proença, S.B. Portuguese atlantic seashore streets: the production process interpretation. In *Transitional Streets. Narrating Stories of Convivial Streets*. Beirut: NDU, 2018, pp. 173–184. ISSN 2617–3727.

invention of the sea," which promoted the formation and urban transformation of coastal cities.

The contemporary morphological conformation of the street by the sea is relatively recent, since until the beginning of the 20th century there was no definite separation between the city, urban area, and the beach area. Indeed, the buildings closest to the sea lay directly on the sand, in the low, sandy beaches, or on the rock. Later, especially in the coastal agglomerations that were more developed due to fishing activity, an urban boundary was built between the city and the natural space, consisting of port infrastructures such as piers and docks. The public space adjacent to the sea was, therefore, frequented by the poorer social classes, fishermen and merchants. Economic development transformed the urban space by the sea, port infrastructures were demolished and rebuilt further away from the city centre, replaced by stars and ramps to the beach, terraces and spaces to observe the sea. The street by the sea becomes a place to observe the seascape and to be observed, the public space begins to be frequented by the more affluent social classes. The street by the sea becomes, even in a borderline position with respect to the forma urbis of the cities, the centre of the coastal cities.

For Corboz,⁷ it is the social phenomenon of the Grand Tour that leads to the introduction of belvederes into the urban landscape and generalises an aesthetic institution of the landscape as a figure. Indeed, the Grand Tour signified for art a renewed interest in the landscape, especially the maritime landscape, as the subject of pictorial representation, scenes of everyday life in the urban space adjacent to the sea began to be depicted. The coastal landscape has, over time, been one of the main subjects depicted in art, portrayed for its romantic characteristics describing the tension between the two natural elements, the sea and the land, the last outpost before the unknown.

Imago and Forma Urbis

In the ancient times, the representation of monsters - in the Latin root, *monstrum*, meaning 'divine sign, prodigy' from the theme of

⁶ Corbin, A. L'invenzione del mare. Riti e culture. Venezia, Italia: Marsilio, 1990.

⁷ Corboz, A. *Il territorio come palinsesto*, Napoli, Italia: Diogene n. 121, 1983, pp. 14–35.

monēre 'to warn, to admonish' and finally to show - on maps allowed the recognition of unknown territories, those in which man had not yet ventured. The depiction of the unknown was at the same time a possibility of appropriating the unknown, to make it measurable and describable. In the past, the representation of the urbe, or the physical characteristic of the city, corresponded to the representation of the imago and forma urbis. However, between the 15th and 18th centuries, a cultural movement arose in Rome that placed the city at the centre of research with the aim of decoding and representing urban form through the morphological decoding of the layers that composed it. The cultural movement known as Instauratio Urbis was developed by Giovanni Battista Piranesi and Giovanni Battista Nolli, among others. In the meantime, the difference between the form and the image of the city is delineated in which the transformative characteristics inherent in the concept of Forma (Instauratio) Urbis are opposed to the conservative characteristics of Imago (Renovatio) Urbis. The imago therefore describes the crystallisation of a moment in time, as in Fabio Calvo's Antiquae Urbis Romae (1527) and Pirro Ligorio's Antiquae Urbis Imago (Libro delle Antichità di Roma, 1553, Venice). Panofsky approaches the issue of image description - to which tradition has given the name ekphrasis from the sensory properties of the figure, concluWding that they can never be determined exactly and exhaustively8.

Forma Urbis

Forma Urbis Romae is the title of the marble iconography (Severian marble plan) of the *urbe* of ancient Rome. Nowadays only a few hundred fragments are preserved, and over time they have also been used as a metaphor for illustrating the difficult process of selection, cataloguing and classification required for the act of composition. Moreover, recognising form, indeed, as content does not mean giving it a subordinate role but means bringing it back with all its weight and autonomy into the architectural design process. Form is the synthetic moment between

⁸ Panofsky, E. "Introduzione", in Id., *Studi di iconologia. I temi umanistici nell'arte del Rinascimento* (1939), ed. by R. Pedio, Torino, Italia: Einaudi, 1975.

the initial reflection and the provisional conclusion of a continuous and inexhaustible research activity in which inductive and deductive operations are equally necessary and present⁹.

Drawing as an aesthetic practice

Francesco Careri titled his 2006 essay *Walkscapes*. *Camminare come pratica estetica* (Walkscapes. Walking as an aesthetic practice)¹⁰, affirming the act of walking as an autonomous form of art, an act capable of bringing about transformations in the territory. Referring to Careri's title, we could affirm that drawing is also an aesthetic instrument of knowledge and transformation of the landscape, or as Purini writes, a privileged, primary place of architectural thought. Through his intellectual work, Franco Purini argues that although there are other ways of conceiving architecture, the imagination, which can be communicated through the graphic exercise, is the true native moment of composing and designing. In the introduction to the text *Una lezione sul disegno*, Franco Cervellini¹¹ (2007) describes a sheet of paper hanging in Purini's studio that contains a series of words and actions: folding, juxtaposing, overlapping, cutting, edging; identifying them as verbs of operarare for manipulation.

Drawing is the oldest form of human representation and expression, which drove images carved in the walls of caves. A creative, critical, and mental technique that allows us to understand and interpret reality. In fact, it is an intentional visual operation, sometimes of existing objects or just imaginative scenarios of the mind. Moreover, drawing was born and had its beginning in human curiosity, in the ability to observe and abstract, to imagine and store the real world to which human beings have access¹². The first manifestations of drawing are

Rogers, E.N. *Il senso della storia*. Presentazione del corso di Storia dell'architettura moderna, Politecnico di Milano, AA. 1964/1965, Milano, 1999, pp. 2–3.

Careri, F. Walkscapes. Il camminare come pratica estética, Milano, Italia: Einaudi,2016.

Purini, F. *Una lezione sul disegno*. ed. by Franco Cervellini e Renato Partenope. Roma, Italia: Gangemi Editore, 2007.

Lobato de Faria, E. *Imaginar o Real. o enigma da concepção em arquitetura*. Caleidoscópio- Edição e Artes Gráficas, S.A, Lisboa, 2016, pp. 155.



Fig.1 - Lisbon Metropolitan Area, the case of Cascais and Sesimbra. - Source: Author Edition 2022

linked to images that remain in the memory of the human being. However, it is important to emphasize the distinction between drawing as an image and drawing as rational abstraction. In her book, Lobato de Faria asks herself, and poses the silent question to the reader, whether it is reasoning that draws or drawing that ratiocinated. Indeed, the draw can be understood as a tool to formulate and define a thought. The rationalization allows the transposition and manifestation of an embryonic and imprecise idea expressed on a paper in the form of lines and textures.

The draw is the result of an intention and a thought, but it invariably reveals itself as the element that rationalizes, that is it has its own rational intention. In conclusion, drawing allows us to critically read the city, its elements, and its urban form, knowing how to choose each time which of these to recognise and emphasize, to extract from the image that our eyes observe. Indeed, Leon Battista Alberti, in his text *De Pictura*, wrote: "before painting the surface, I make a square as large as I like with straight angles: which serves as an open window, so that one can see history."¹³

Drawing as a method of urban form recognition

Data acquisition

The case studies presented in the article are Cascais and Sesimbra, coastal cities located in the Lisbon metropolitan area, which interface with the sea through the urban space of the street by the sea (Fig. 01).

In order to describe the urban form underlying the substrates of the *imago*, of the two case studies, two different types of drawings were produced, freehand and through the aid of technical drawing, in which the subject was the decoding of the coastal urban space. The technical drawing used the stylistic rules defined by the theory of urban morphology, which enabled the different layers that compose the city to be decomposed into layers. The freehand drawing, through the contrast between solid and negative, light and shadow, line and texture, made the characteristic signs of the coastal cities evident.

27 BOOK OF ABSTRACTS

[&]quot;(...) prima nel dipingere la superficie faccio un quadrato grande, quanto mi piace d'anguli dritti: il quale mi serve per una finestra aperta, onde si possa vedere l'historia." Leon Battista Alberti, De Pictura.



Fig.2 - Cascais morphological decomposition: Topography, Built-up area, Urban Layout; Scale 1.14000; Cas-cais historical photographs: (I) Author Unknown, (1900), Passeio Maria Pia, Avenida D. Carlos I e Praia da Ribeira, PT/CMCSC-AHMCSC/AFTG/CAM/A/01028; (II) Author Unknown, (1900), Passeios Ma-ria Pia e Príncipe Real D. Luís Filipe. Ao fundo, Casino da Praia, PT/CMCSC-AHMCSC/AFTG/CAM/A/00254; (III) Author Unknown, (1920), Avenida D. Carlos I e Praia da Ribeira, PT/CMCSC-AHMCSC/AFTG/CAM/A/00913- Source: Author Edition 2022

Drawing as a scientific method requires strict discipline, which is why the following rules have been adopted: I) the two different types of drawings, hand-drawn and technical drawing, were produced by the two different authors in an independent form; II) The resulting designs and interpretations were not shared between the authors until the results were finalised; III) the hand drawings were made on the same day; IV) the drawings by hand as *ex tempore*, each one took less than 5 minutes; V) The application of the same drawing material; VI) the hand drawings were made from a standing position; VII) the technical drawings made using cad programmes focused exclusively on public space.

Drawing as a method

Van Gogh wondered what drawing was if not the act of opening a passage through an invisible iron wall that seems to lie between what one feels and what one can¹⁴. Moreover, to draw, as Purini writes, is to explore a conceptual space, to perform a cognitive and creative rite, to establish a logical order and at the same time transgress it, to relate space to tectonic solutions, to explore the very limits of architecture, opening up to advanced visions of the past, present and future¹⁵.

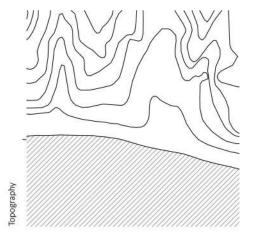
The understanding of reality is achieved through mechanisms linked to visual perception, the mental processing of forms with meaning, to which an interpretation is associated¹⁶. Technical drawing provides a way of observing the layers that compose cities through decomposition into layers. An operation of abstraction through which it is possible to read the form in each fragment of reality observed and compare it with the image, such as historical photographs (Fig. 02, Fig. 03).

Nulla dies sine linea, is Pliny's famous motion meaning "not a day goes by without drawing" according to which drawing becomes a method and a critical tool for interpreting the complex reality that

Lavoratti, G. Disegno dell'architettura grafica editoriale. Il disegno comunica, ma come si comunica un disegno? In Contenuto e Forma. Lo sviluppo della comunicazione visiva nella relazione tra ricerca e pratica progettuale, 2020.

¹⁵ Purini, F. Il disegno come teoria. *Rivista di estetica*, 71, 2019, pp. 19–37.

Massironi, M. Vedere con il Disegno, aspetti tecnici, cognitivi, comunicativi. Padova, Italia: Franco Muzzio Editore, 1999.





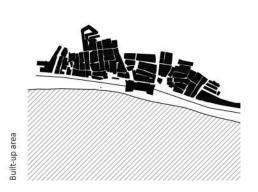








Fig.3 - Cascais morphological interpretation: Urban hierarchy, Streets perpendicular to the sea, Street by the sea, Scale 1.14000; Cascais perspectives: (I); (III); (III). - Source: Author Edition 2022

exists around us. Conscious that the difficulty of any descriptive science is inherent in the search for a synthesis of the general, abstract representation of the concrete details of the object it describes¹⁷.

Recognition of the forma urbis in the imago

When writing, drawing, designing or building, we produce layers of words, signs, and make choices to hierarchize forms from the layering of elements. Indeed, in *L'architettura della città*, Aldo Rossi describes the urbs as a complex object composed of different artefacts that contribute to defining the city¹⁸.

In figures 04 and 05 the cases have been morphologically decomposed according to different layers, the first one analysing the urban hierarchy and making evident the central urban spaces of today's coastal cities. As can be observed, the street by the sea is nowadays the linear centre of coastal cities. By removing the layer depicting the street by the sea, it is possible to observe how in both coastal cities there were, like a comb form, public spaces that were articulated, according to the topography of the territory, in the direction of the water body. Proving the initial hypothesis that before the construction of the street by the sea, coastal cities faced the sea through a relationship of perpendicularity of the public space to the water. In the last layer, the most interpretative, the coexistence of space longitudinal to the water body while maintaining a diachronic relationship with the perpendicular structuring axes is defined as street by the sea.

The double complementary approach, necessary for the research of the form underlying the contemporary image of the coastal space, has made it possible to recognise the intrinsic qualities of the public space structuring the cases analysed. In freehand drawing, this becomes evident when the main elements are abstracted, eliminating the overlapping layers of images that define the space. (Fig. 04, Fig. 05).

Drawing allows us to reveal and explore complex reality in a purer vision preserved by the human eye and transmitted on paper through traces and lines. A graphic and mental exercise that enables the decod-

¹⁷ Strappa, G. L'utilità degli studi di morfologia urbana e il rinnovo del nostro giornale, in Editoriale U+D Journal, issue 15, 2021.

¹⁸ Rossi, A. L'Architettura della città. Padova, Italia: Marsilio, 1966.

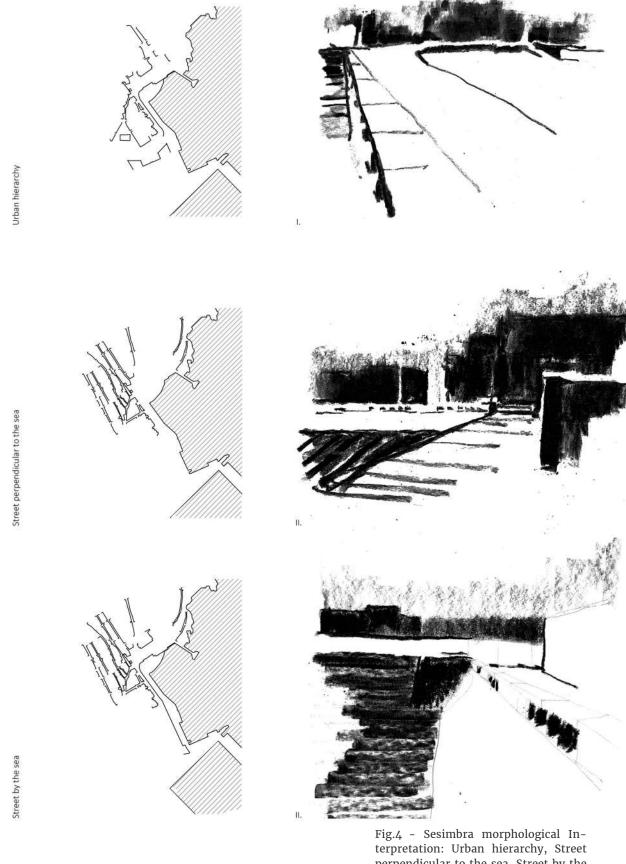


Fig.4 - Sesimbra morphological Interpretation: Urban hierarchy, Street perpendicular to the sea, Street by the sea, Scale 1.14000; Sesimbra perspectives: (I); (III); (III). - Source: Author Edition 2022

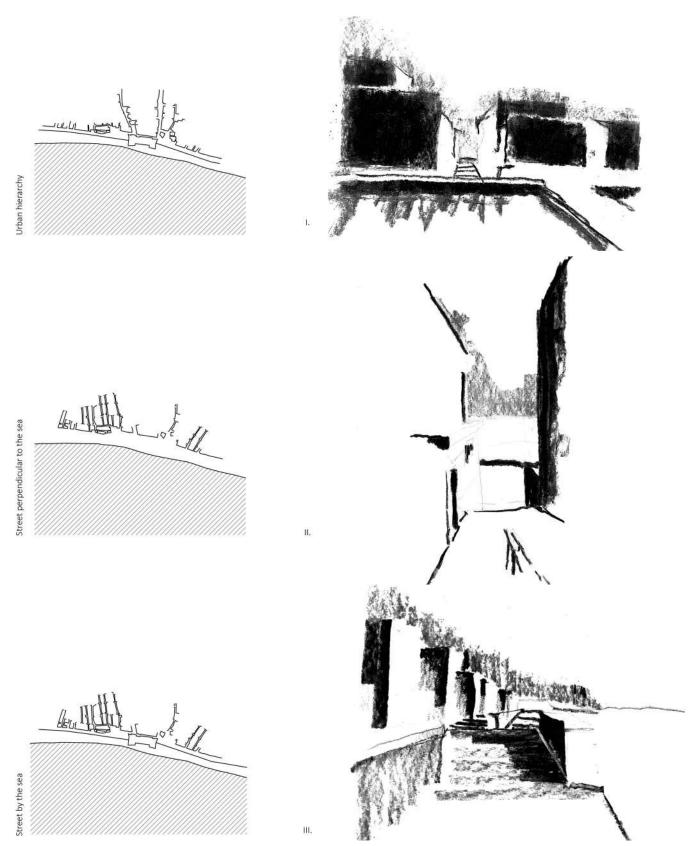


Fig.5 - Cascais: (I) Plan des Ville, Citadelle et Forts de Cascaes XVIII - Map of the City, Citadel and Forts of Cascaes XVIII; (II) Plan des Ville, Citadelle et Forts de Cascaes XVIII - Map of the City, Citadel and Forts of Cascaes XVIII. Cascais, Scale 1.14000; (I) Author Unknown, (1900), Barcos de pesca junto à Praia da Ribeira. Ao fundo, Praias da Rainha e da Conceição, PT/CMCSC-AHMCSC/AFTG/CAM/A/00546; (II) Author Unknown, (1900), Barco de pesca na Baía de Cascais. Ao fundo, Avenida D. Carlos I, PT/CMCSC-AHMCSC/AFTG/CAM/A/01062. - Source: Author Edition 2022



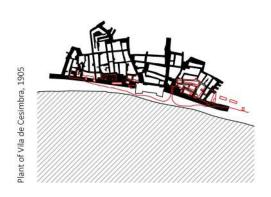




Plan des Vile, Citadelle et Forts de Cascaes XVIII



Fig.6 - Sesimbra: (I) Planta da Vila de Cesimbra, 1905 - Map of the Village of Cesimbra, 1905, Scale 1.14000; (II) Planta da vila com a disposição urbana vigente na transição das décadas de 1930-1940 (1939-1941). Bernardo, 1941: 280-281. - Village plan with the urban layout in force in the transition of the 1930-1940's (1939-1941). Bernardo, 1941: 280-281. Sesimbra: (I) Artur Pastor, (1957), Panorâmica da praia e da vila de Sesimbra, PT/AMLSB/ART/000978.; (II) Artur Pastor, (1943-1945), Frota na areia, PT/AMLSB/ART/000960 - Source: Author Edition 2022





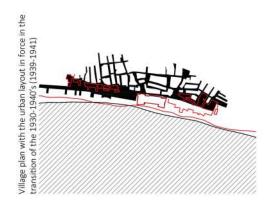




Fig.7 - (I) Cascais Perspective ; (II) Sesimbra Perspective. - Source: Author Edition 2022

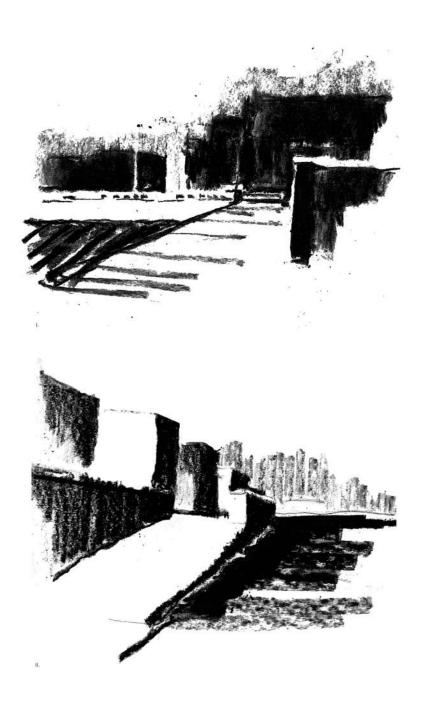


Fig.8 - Detail of the identity of the place: (I) Cascais; (II) Sesimbra. - Source: Author Edition 2022

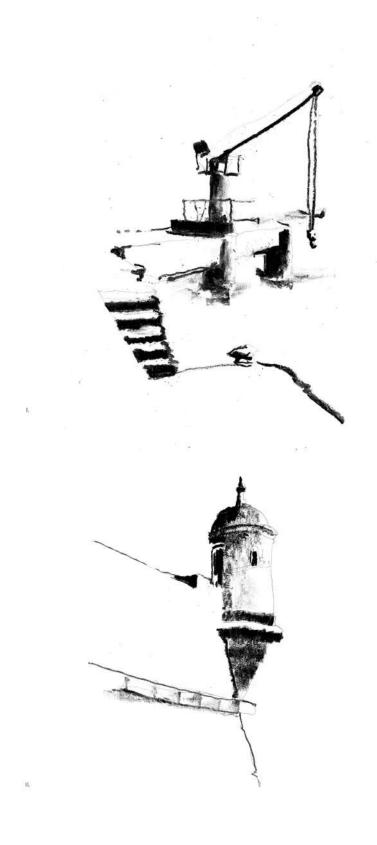


Fig.9 - Detail of the identity of the place: (I) Cascais; (II) Sesimbra. - Source: Author Edition 2022

ing and systematisation of observed reality. The drawing allows us to abstract from the contemporary image of coastal cities the form underlying the different substrata that today define the street by the sea. To prove the result obtained through the complementary methodology, the two case studies were redrawn from the historical plans in comparison with the historical photographs (Fig. 06, Fig. 07).

Discussion

The difficulty for critics to accept drawing as a methodological procedure of non-predeterministic recognition of form, in a universe of cases, has contributed to relegating drawing to the field of analysis and not composition. Namely, considering the drawing as a reading tool and not as a design instrument. We believe, instead, that the act of drawing permits learning to read existing form, an exercise in decoding form associated with critical and analytical reasoning, in which each line is the result of a thought expressed on paper. Aware that reality is what our imagination perceives it to be, an image can describe a set of facts in such a way that visual perception itself is related to the conditions and the image itself¹⁹.

The reading of urban form in contemporary times, as a method for decoding the present, requires reflection on the meaning and relevance of urban studies ad *finem proiectie*, with the aim of the project (Fig. 08, Fig. 09).

For, as Tafuri²⁰ writes, the redundancy of images whose iconographic reference values are devoid of new meanings, will result in the emptiness of form; or rather, in the repetition of forms and not of types of models.

Final Consideration

The drawing is a critical and creative tool, which allows us to read the existing reality, the world we inhabit. The rational abstraction critically forces the observed reality to be immanent to the subjacent object.

¹⁹ Ungers, O.M. Designing and thinking in images metaphors and analogies in Atlas of Places, 1982, pp. 9–10.

Tafuri, M. Teorie e storia dell'architettura. Bari, Italia: Laterza, 1968, pp 25.

The abstract draw allows to differentiate the coastal *imago* from the *forma urbis* and to emphasize the urban elements that belong to the identity of the place. The contrast between volume, shadow, line and textures has the potential to characterize the *forma urbis*. Decoding the form of the city means relating the cognitive to the operative of architectural criticism²¹. Since form is content and perception is not mirage but measure, it is a means to reconstruct history²². Drawing allows us to get to know reality, to attribute values and characteristics to it, to give shape to the unknown and thus give it a name. In conclusion, the attribution of characteristics permits us to operate in the landscape by means of value accreditations to the elements, which like *monēre* mark permanence and transformation in compositional processes.

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'You will be made most welcome': Belfast's small evangelical halls.

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Abstract

Despite a significant impact from Belfast's history of conflict and division, and even from post peace process redevelopment, small street-side Christian worship halls exist, sometimes precariously, in a complex network across many parts of the city. With exteriors that are visually distinguished by their use of biblical text, their lack of ostentation, and, often, by their expediency, these buildings are overlooked as meaningful places. They are largely disregarded by architectural discourses and by the flourishing scholarship on evangelical culture in the region.

Triangulating photographic evidence, maps and documentary sources, this paper focuses on exploring the ways in which the halls have interacted with transformations on the streets of Belfast. Considering how material changes relate to efforts to maintain and interpret 'sacred' space,¹ whilst adapting to a changing environment and changing population patterns.

The paper examines a set of three responses to change: halls that have remained, been reintegrated, or that have been displaced. The paper finds that the designs of mission hall exteriors have been responsive to changes on the city streets, displaying concerns with blending-in to daily life,² visibility and scale, and reflecting wider changes in the permeability and accessibility of Belfast's streets.³

David Chidester and Edward T. Linenthal. *American Sacred Space*. (Bloomington: Indiana University Press (1995)

² John Harvey, Image of the Invisible : The Visualization of Religion in the Welsh Nonconformist Tradition, (Cardiff: University of Wales Press (1999).

David Coyles, "Journeys through the Hidden City: Giving

Keywords

Evangelical, architecture, Belfast, plain style, photography

Introduction

Belfast is a city of churches. A complex "religious landscape"⁴ is revealed as the streets are navigated. Walking the streets will often lead past successions of large church edifices, many presaged by the appearance of a spire above the surrounding buildings, but also apparent is a wide variety of smaller, more modest church buildings. One building type within this complex landscape is the mission hall.⁵ Associated with the region's significant history of 'popular' evangelicalism, these are small Christian worship-halls, built outside –or on the very edge of institutional support. These are plain buildings that contrast with the elaboration of the churches, reflecting one of the maxims of the famous local evangelist W.P. Nicholson: "At the last the wise will be the soul winner, and he alone. Not the man that built and garnished churches…" ⁷ Histories of the halls feature narratives beginning with local groups meetings in houses and in borrowed or temporary spaces. Each drawing on social and family links in the surrounding area.⁸

Visibility to the Material Events of Conflict in Belfast." *Environment and Planning D: Society and Space* 35/6 (2017)

⁴ Chidester and Lilenthal, American Sacred Space: 14.

For the sake of clarity 'mission hall' here is used as a broad term to describe small scale halls which share the visual and material characteristics outlined in the text. The use of the term is necessary for easy reading but is not unproblematic as the halls, despite their evangelical forms of religious practices are theologically and socially diverse. The term 'gospel hall' will also be found throughout the text, this refers to halls that are run by 'brethren' groups which comprise the largest subcategory of mission halls.

⁶ See, for example: Crawford Gribben and Andrew R. Holmes, Protestant Millennialism, Evangelicalism, and Irish Society, 1790–2005. (New York: Palgrave Macmillan, 2006); Andrew R. Holmes and Stuart Mathieson, "Dwight L. Moody in Ulster: Evangelical Unity, Denominational Identity and the Fundamentalist Impulse." Journal of Ecclesiastical History, 72(4) (2022): 800–821.

⁷ William Patteson Nicholson, "Only soul winners shine." *Life Indeed*, April 1976: 75.

⁸ E.g. Victor Maxwell, *Belfast's Halls of Faith and Fame*,(Belfast, Northern Ireland; Greenville, S.C.: Ambassador, 1999). Wynnfield Hooke and David Boyd. A History of Some Christian Assemblies in Ireland (New

Whilst church buildings have generally formed landmarks that resist the tides of change and redevelopment, the mission halls have been more exposed to the processes of change that have characterised the city for the past 50 years. The paper aims to visually explore such interactions between the changing city and the mission halls.

Academic interest in Protestant evangelicalism in Northern Ireland has neglected questions of the material, visual or spatial, despite commenting on their importance. ⁹ The architectural writing on the city touches only briefly upon the mission halls. ¹⁰ In the spirit of a growing interest in the seemingly benign, everyday built environment of the city this paper asks the questions: how does the design of the mission hall exterior interact with changes in the streets around it? How has change affected the simple message "all welcome"?

Context

The mission halls exist within a complex context of material, spatial and social change. The closure of many large industries, the conflict of the 70s, 80s and 90s, and government planning initiatives all worked to depopulate Belfast's inner-city. The landscape of Victorian red-brick terraced streets built to house the industrial workforce –the home of most mission halls, was largely swept away. These streets were subject to a large-scale public rebuilding programme by the Northern Ireland Housing Executive (NIHE).¹¹ These were processes that left the reli-

Testament Truths Practised. Glasgow: Gospel Tract Publications, 2014).

9 See, for instance: Patrick Mitchell, Evangelicalism and National Identity in Ulster 1921–1998. (Oxford: Oxford University Press, 2003; Glenn Jordan, Not of This World?: Evangelical Protestants in Northern Ireland (Belfast: Blackstaff Press, 2001); Claire Mitchell and Gladys Ganiel, Evangelical Journeys: Choice and Change in a Northern Irish Religious Subculture. (Dublin: University College Dublin Press, 2011); David N. Livingston, Margaret C. Keane, and Frederick W. Boal, "Space for Religion: A Belfast Case Study." Political Geography 17,2 (1998): 145–70. For some discussion of evangelical material culture in a Northern Irish Context see: Frances King, Material religion and popular culture. (London, Routledge, 2014).

See Richard Oram Expressions of Faith: Ulster's Church Heritage, (Newtownards: Colourpoint, 2001):, 54,87,97; Paul Harron, Architects of Ulster: Young & Mackenzie: A Transformational Provincial Practice 1850–1960, (Belfast: Ulster Architectural Heritage Society): 294,297,280; C E B Brett, Buildings of Belfast: 1700–1914, (Belfast: Friar's Bush Press, 1985): 23.

11 C.E.B. Brett, Housing a Divided Community. (Dublin, Ireland:

gious segregation that has long characterised the city largely unaltered. Although now remodelled and re-imagined, working-class areas of contemporary Belfast remain spatially segregated into Protestant and Catholic communities.¹² The religious landscape of buildings interacts with this spatial segregation and the mission halls in inner Belfast exist entirely within Protestant communities.

The workings of spatial segregation have been the subject of a great deal of academic interest. Researchers have examined material attempts to manage religious division at all scales in the built environment. Exploring how the planning of roadways, physical barriers, public and private spaces, housing, and even 'empty' space has reflected a cocktail of ideologies and concerns.¹³ Planning priorities have meant that Belfast has become a 'doughnut' city with arterial routes providing access past the segregated working-class areas to the city centre for workers living on the outskirts.¹⁴ In contrast with the permeable grids of terraced housing that once existed, the residential streets where mission halls are often found are now characterised by a "seemingly benign, everyday architecture of cul-de-sac housing, dead-end roads, footpaths and landscaping." Features that have been described as "intra-community boundaries" mitigating against social mixing, even within segregated communities.¹⁶

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Peter Shirlow and Brendan. Murtagh, *Belfast: Segregation*, *Violence and the City.* (Pluto, 2006).

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¹⁴ Ken Sterrett, Mark Hackett, and Declan Hill, "The Social Consequences of Broken Urban Structures: A Case Study of Belfast."

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David Coyles, Brandon Hamber, and Adrian Grant, "Hidden Barriers and Divisive Architecture: The Role of 'Everyday Space' in

Methodology

The halls are conceived of as a 'facility' for the people –who, rather than the building, are the real church.¹⁷ A necessity for evangelising and fellowship, a space of utility, where form is secondary but communicating the message of salvation is vital. The exploration aims to engage with what has been called the 'politics'of sacred space.¹⁸ Considering the mission halls as places which require both 'symbolic labour'¹⁹ and actual labour and directing the investigation to questions around the effort required to maintain; acquire; control interpretions and reinterpretation; make and remake. The investigation aims to pay attention to the capacity of material things and spaces to change, altering their meaning, falling into disrepair, becoming problems in need of answers so that constant work is required to maintain them.²⁰ Exploring how these processes can be discerned through investigation of the built environment.

The paper draws on: cartographic data; an engaged visual inquiry through photographic documentation; and on documentary evidence, to explore the research questions at a variety of scales and locations in the city.

Mission halls and their contexts have been visited and photographed between September 2020 and July 2022. As John Berger points out, a photograph is taken out of context and becomes "information severed from all lived experience ... the memory of an unknowable and total stranger." Berger argues that it is necessary to 'construct a context for the photographs, to construct it with words, to construct it with other photographs.' ²² Similarly Gray and Malins argue that images alone are unlikely to be "self-explanatory". The research question here is examined through a combination of image and text as the basis of inductive inquiry. Visual data collected has been organised and reflected upon as

Conflict and Peacebuilding in Belfast." Journal of Urban Affairs (2021): 1–24.

¹⁷ King, Material religion and popular culture: 121.

¹⁸ Chidester and Lilenthal, American Sacred Space.

¹⁹ Ibid: 17.

Thomas F Gieryn, *What Buildings Do.* (Theory and Society 31, no. 1 2002): 35

John Berger, *Understanding a Photograph*, (London: Penguin Books, 2013): 52.

²² Ibid: 60.



Fig.1 – Map of Belfast's mission halls: – Source: Author 2022

visual evidence as well as a form of field notes, aiding recollections of the experience of visiting the sites. Informing these reflections is an examination of the evangelical literature –of newspapers, histories and first–hand accounts for information relating to the context; the material hall; and to change over time.

Lines of enquiry have been informed by the creation of a map. Representing an original contribution to research, a GIS map has been produced through documentary research from a variety of sources contemporary with the halls. These have been cross-referenced with cartographic data such as historic Ordinance Survey maps, satellite images, historical street directories and through fieldwork in order to develop a map of both extant and non-extant mission halls.

Map of Belfast's mission halls:

- (α) Maranatha Gospel Hall
- (β) Parkgate Avenue Gospel Hall
- (χ) Tamar Street Baptist Mission Hall
- (δ) Canton Street Belfast City Mission Hall
- (ε) Jersey Street Belfast City Mission Hall
- (φ) Rathmore Street Mission Hall
- (γ) Matchett Street Gospel Hall
- (η) Branagh Mission Hall, previous location in Bridge End
- (1) Branagh Memorial Church
- Source: Author 2022)

The map (fig. 1) shows the Belfast city area, white dots represent extant mission halls, grey dots represent halls that have been demolished. The clusters of dots to the Northwest, South West and East of the city centre show dense areas of mission hall activity in the Shankill, Sandy Row, and Ballymacarrett respectively, all areas which are associated with strong ethnic segregation and economic deprivation, and all areas that have been subject to redevelopment activity. Green dots represent the halls visited.

This process has suggested three broad lines of enquiry that organise the investigation, halls that have: remained, been reintegrated into the redeveloped street, and been displaced and rebuilt elsewhere.

Remained

The map suggests that halls closest to the city centre have tended to close. The Maranatha Gospel Hall on Linfield Road, at the edge of Sandy Row is presently the closest remaining hall to Belfast city centre.

Approaching the hall on foot, signs and traffic cones added by the residents show that this is a site of disputes around parking, access to the hall is lined with parked cars despite a sign and a set of bollards. The presence of the hall is striking (fig. 02) because it is the only remaining building on the north side of the road. All the land around it has been cleared, including the parcel in front. A double row of spiked steel anti-climb fencing now screens the façade.

The Ordinance Survey of Northern Ireland (OSNI) map of 1901–1957 shows that the lane into the hall was once a terraced street, ²³ one of four that joined Linfield Road with Railway Street, running parallel. Examination of a sequence of satellite photographs shows the increasing demolition around the hall, the land reused for car–parking, the gate added in 2006.²⁴

Signs on the gable spell out 'Welcome to Maranatha Gospel Hall' and set out the times of meetings, two more signs on the gateway contain biblical texts. These are simply designed with legibility an apparent concern but they are modestly sized. Visual connections are maintained through blue block colours with white type and borders. The building itself is a simple pitched structure, with tiled roof and pebble-dashed walls. The entrance is on a side elevation, most likely it opened onto the old, terraced street, suggesting that the sign on the gable, and perhaps the vertical central section has been made necessary by change. The hall appears besieged, the final reminder of the previous landscape, in the way of some large-scale future plan.

Parkgate Avenue is a busy side-street, a commuter 'rat-run'. An old photograph confirms that the gospel hall here has been subject to little

PRONI. n.d. "OSNI Historical Map Viewer." Accessed May 18, 2022. https://apps.spatialni.gov.uk/PRONIApplication/.

²⁴ Google Earth. "Satellite View of Linfield Road." n.d. Https://Earth. Google.Com/Web/@55.54740896,-5.93905335,-93392.60843688a,140997.935 98026d,35y,-0.00133896h,48.90229274t,359.9999r?Utm_source=earth7&utm campaign=vine&hl=en. Accessed July 10, 2022.



Fig.2 – Views of Maranatha Gospel Hall – Source: Author 2022



Fig.3 – Sequence of images showing alterations to the façade of Parkgate Avenue Gospel Hall Source: Author 2022

change since it was built in the 1930s.²⁵ The period of the study afforded the opportunity to document a change here, the original porch has been replaced to create a new façade (fig. 3). Painted a contemporary shade of grey, the new porch is in a broadly modernist style. An asymmetrically sloped roofline provides height above the entrance, allowing for a large window that vertically emphasises the doorway. Clear glazing ensures that the interior can be glimpsed from outside the hall, presenting a more 'open' appearance. Conspicuous defensive features such as window grills that were necessary on the old porch have been removed.

The large brown sign has been re-made. An image of a study bible has been added to the text of John 3:16²⁶ but the roman typeface and the use of capitalised words for emphasis remain, presented in shades of grey with yellow detailing (fig. 4). It is placed at right angles to the road to make best use of the sight-lines available. A few streets away the assembly hold 'drive in' gospel meetings in a local carwash. A visit to this location shows a display of biblical text (fig. 4), the message placed in a surprising and unexpected context. Its form barely different from the surrounding red, white and blue carwash advertisement.

In Tamar Street in Ballymacarrett, a small mission hall (fig. 4) is virtually the only survivor in an area where mission halls were once tightly integrated into the streets. The OSNI map for 1957–1986 and the 1960 Street Directory show that the area had a mixed industrial and residential character.²⁷ Where Tamar Street once connected back on to the main road, it has now been disconnected to through traffic. The railway that used to run along the rear is a green path with a children's play park. A small brown brick hall was built here in the late 1940s. This hall now altered is still extant.²⁸ A pamphlet cele-

William Gilmore, *These Seventy Years*, (Kilmarnock: J. Ritchie, 1954): 47.

For God so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life. (King James Version)

²⁷ PRONI. n.d. "OSNI Historical Map Viewer."; Lennon Wylie n.d. "Belfast Street Directory 1960." Accessed June 8, 2022. https://www.lennonwylie.co.uk/BSD1960.htm.

²⁸ Maxwell, Belfast's Halls of Faith and Fame: 243.



Fig.4 – Top to bottom: New sign on Parkgate Avenue Gospel Hall incorporating a study bible; Text towards the top of the new façade of Parkgate Avenue Gospel Hall; Text display in a nearby carwash used for 'drive-in' meetings- Source: Author 2022

brating its centenary provides a photograph showing a restrained, ordered design in neat brown brick, a continuous brick course picking out the window lintels and entranceway. The entrance is centred in the gable, the small building opening directly onto the street.²⁹ Today the hall presents a gabled façade which has been covered in snecked stone cladding since the 1980s. The ghost outline of the original front door can still be discerned in the cladding as a shallow rectangular projection. An extension has been added to the right of the gable, providing a new entrance and so breaking the direct path from street to interior. Every window and doorway in this building is heavily protected. Exploration reveals evidence of violence and damage—graffiti on the walls. Dents, pits, burns and indentations in the heavy steel doors and window grills.

At Canton Street, the mission hall has been retained in the heart of the redeveloped area. The hall, opened in 1913 replacing some terraced houses in the street.³⁰ Canton Street itself no longer exists, except as this short run of mission hall in the centre of the new development. The hall is painted in a red-brick red, common in the city where rendered houses must blend-in with the red-brick. The incorporation of the hall appears to have involved compromises, a great deal of space has been left around it, a zig-zagging run of railing has been placed in one paved area to the east of the hall, preventing cars parking there, but creating a puzzling, unusable space. In front of the primary façade a raised and railed off patch of grass is placed, inaccessible to walkers. A series of houses ends up with ever decreasing rear gardens to accommodate the footprint of the hall. The impression is of an immovable natural obstacle, resulting in problems that had to be solved in tandem with land-scaping the public space.

Reintegrated

Jersey Place is a an 'L' shaped residential street a little way off the Shankill Road in West Belfast. The OSNI maps for 1957-1986 show that

[&]quot;Tamar Street Baptist Mission Hall. 1906 - Centenary - 2006."

³⁰ Belfast Newsletter. "M'Quiston Memorial Congregation, Twenty First Anniversary Report," April 29, 1913.



Fig.5 – – Views of Tamar Street Mission hall and surrounding area – Source: Author 2022

it replaced Jersey Street, rebuilt on the same footprint.³¹ The mission hall retains the old name and has been reintegrated into the reimagined residential area. A hall was first built here in 1890 but was destroyed by an accidental fire in 1977.32 A photograph taken by the NIHE around 1985 (fig. 07) shows the hall that replaced the original, the neatly kept mission hall contrasting with the bricked-up windows and damaged houses around it. It incorporated both ecclesiastical and domestic elements, combining arched gothic windows with a domestic scale and white painted bargeboards and finials that echo the surrounding terraced houses. This stylistic continuity is also present in the reimagined building, in which a polychromatic brickwork course integrates the hall with the residential street. The current building inverts the 'L' shape of the street, creating its own elbow with relocated entrance at its crook. This is glazed and is heavily defended by steel grids, its low roofline, protected by barbed wire. The approach from the street is blocked by locked gates. This contrasts with the earlier design which, like the surrounding houses opened straight onto the street. A biblical text is presented on the gable wall to the street: 'Seek ye the Lord while he may be found'. A small sign lists the weekly meetings, finishing with 'Everyone Welcome'. A carpark is provided beside the building, entered from the main road rather than Jersey Place. The visual cues that this is not a main thoroughfare, and the defensive features on the hall combine to make walking in the area uncomfortable, with a sense that purposeless wandering here is not appropriate.

The Rathmore Street mission hall in the East of the city (Fig. 8) has been similarly reintegrated into redeveloped streets. The history of the hall is particularly well documented, and the following extract describes the old hall's place in the streets:

Rathmore Street, beginning at Shamrock Street coursed its way around a bend and up a hill for about half a mile to Cherryville Street. It was at the heart of a maze of small streets that formed a tightly knit

³¹ Ibid.

[&]quot;Jersey Street – Belfast City Mission." n.d. Accessed May 10, 2022. https://belfastcitymission.com/portfolio-item/jersey-street/; Belfast Telegraph. "Church Notices, Jersey Street Hall Re-Opening," March 25, 1978: 5



Fig.6 – Views of Canton Street Mission Hall – Source: Author 2022

community ...The Rathmore Street Mission Hall sat neatly in the middle terrace of houses and blended in...³³

Old photographs show that the mission hall was a small, pitched building, its gable to the road.³⁴ It featured simple gothic arch topped doorway and windows, economically indicating its religious purposes. Render softening the lines suggesting a naïve church. The redevelopment of the surrounding area predates the building of the new hall and the documentation suggests that the community were concerned to reintegrate the building with its surroundings, describing a situation in where 'the church building still retained its old façade, in stark contrast to the new housing'³⁵ A grant that would have required the hall to be open for non-religious community events was refused, and a rebuild funded by the group was completed in 1992.³⁶ It is more ecclesiastical in character than Jersey Street with a set of three gothic windows and a large arched entrance. It opens directly onto the street and several cars were parked directly in front, tight against the entrance, despite a no-parking sign.

Displaced

Matchett Street Gospel Hall, off the Shankill Road was displaced in the 1980s. When the area was redeveloped by the NIHE,³⁷ it was moved across the road to the current site. A photograph shows that the older hall was a simple brick building on the street corner with a pitched roof, the only decoration a set of dentils below the roofline, typical of the buildings that would have surrounded it.³⁸ The entranceway was a simple door opening onto the street. In comparison, the new site provided a huge increase in scale, the hall and carpark fill an area many

³³ Maxwell, Belfast's Halls of Faith and Fame, 160

Philip McAlpine, "East Belfast Streets, A 439 Rathmore Street – Jun 1981." (2012), https://btsecuresession.com/belfast35mm.co.uk/photo/jalbum/eastbelfast/streets/index.html#A-439%252520Rathmore%252520Street%252520-%252520Jun%2525201981.jpg.

³⁵ Maxwell, Belfast's Halls of Faith and Fame, 165

³⁶ Ibid.

Wynnfield Hooke and David Boyd. A History of Some Christian Assemblies in Ireland: New Testament Truths Practised. Glasgow: Gospel Tract Publications, 2014: 263.

³⁸ Gilmour, These Seventy Years: 44.



Fig.7 – Top to bottom: Jersey Street Mission Hall, 1985, – Source: provided by Northern Ireland Housing Executive), Jersey Street Mission Hall today, -Source: Author 2022

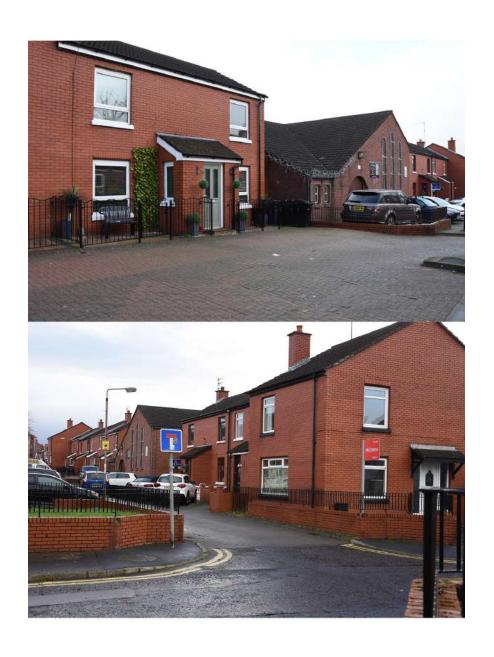


Fig.8 – Views of Rathmore Mission Hall – Source: Author 2022



Fig.9 – Views of Matchett Street Gospel Hall – Source: Author 2022

times the footprint of the old hall. A space partitioned off from the residential streets by tall railings. Signs in the carpark suggest that it is used for regular 'drive-in' gospel meetings.

The building is an irregular rectangular form, a low hip roof leading to a porch with glass block walls, the main hall is recognisable from the exterior by a set of large vertical windows. The traditional form of the gospel hall presented by the earlier hall is entirely gone, the architectural language used is much more that of a commercial or civic building.

Large vinyl texts address the surrounding area, these have been printed in capital letters, in san-serif bold type using block colours, yellow and blue and have been tied across the building. The phrases used are 'Prepare to meet thy God' and 'Christ died for the Ungodly'. The quiet residential street alongside seems to form a captive audience. Texts on a more modest scale are also present, these are written in calligraphic type and are longer, suggesting differing registers.

The Branagh memorial Church, off Island Street in Ballymacarrett was built following the wholesale demolition of Bridge End, an entire district of East Belfast built in the shadow of the railway line. A description of the original hall parabolises this everyday context:

The hall was under the railway bridge and was squeezed in between the gable wall of an end house and the pillars which upheld the bridge. ...there was no natural light in the hall and it's [sic] only entrance ...was so narrow that people appropriately called it "the hole in the wall". ... Those who gathered in those first meetings in that old hall found that "the hole in the wall" became a gate of heaven to their souls. ³⁹

The group later repurposed the Laganview Hall (fig. 10 top), a Methodist mission hall dating to 1891.⁴⁰ Aerial photographs show it occupied the space of two terraced houses in the densely packed streets. When the area was demolished "the Branagh Mission Hall was the last building in the area to be levelled to the ground."⁴¹

When the current hall was built in 1981 (fig. 10 bottom), the land was

³⁹ Maxwell, Belfast's Halls of Faith and Fame: 187.

^{40 &}quot;Opening of Laganview Street Mission Hall", Northern Whig, January 19, 1891.

⁴¹ Maxwell, Belfast's Halls of Faith and Fame, 191.

found in the midst of redevelopments off Island Street, a busy commuter shortcut full of traffic control measures. A sign guides visitors into the residential area. The new building was styled after a Free Presbyterian Church, ⁴² and renamed Branagh Memorial Church, suggesting an alignment with the wider evangelical movement in Ulster and aspirations to much larger scale.

Findings

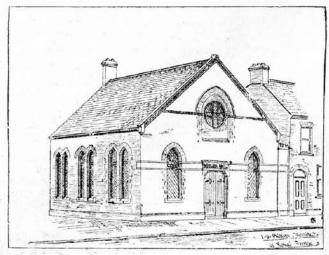
The architecture of the buildings studied tended to be conventional. Changes that are evident to the halls maintained these qualities as the streets changed. As Ray Oldenberg has pointed out, an 'unimpressive' external impression may be an active and important part of a local social space. Visual plainness rather than merely a necessity, representing continuity with daily life, and materially encouraging straightforward, unimpeded communication and social interaction. Studies of evangelical material culture in other contexts have shown that it is the quotidian that forms the material from which biblical interpretations of contemporary life may be constructed. Discontinuity with the surroundings, then may be one of the ways in which the building changes –becoming a problem of interpretation and necessitating material change in response.

The visual evidence shows that the reconfiguration of Belfast's streets associated with the work of the NIHE and with the change to a 'doughnut' city with a commuter belt has often reduced the visibility and accessibility of the mission halls. Navigating the cul-de-sacs and unexpected dead-ends is challenging, reducing the possibility of discovering halls by chance and diminishing the visual presence of the halls for many city dwellers, passing by on the main routes. The scale of community imagined by planners who broke up streets into smaller

⁴² Ibid. 192.

Oldenburg, Ray, The Great Good Place, (Da Capo Press, 1997): 57.

John Harvey, Image of the Invisible: The Visualization of Religion in the Welsh Nonconformist Tradition, (Cardiff: University of Wales Press (1999); Joseph Webster, "Objects of Transcendence: Scots Protestantism and an Anthropology of Things." In Material Religion in Modern Britain The Spirit of Things, edited by Timothy Willem Jones and Lucinda Matthews–Jones, 17–36. New York: Palgrave Macmillan (2015).



LAGANVIEW MISSION HALL, BELFAST.



Fig.10 – Top to bottom: Laganview Mission Hall / Branagh Mission Hall – Source: reproduced from The Christian Advocate, 14 December 1904, by permission of The Methodist Historical Society of Ireland; Views of Branagh Memorial Church – Source: Author 2022

spaces –the community of a street or a cul-de-sac seems not to match to the scale of the mission hall community, the presence of the halls in the redeveloped areas appearing uncomfortable, or out of scale with the few houses around them.

In all of the redeveloped areas studied, the mission halls were the only non-domestic buildings that space had been set aside for and the impact of change often left them with apparent advantages: increased space, car parks and more modern buildings. Indeed, the displaced and reintegrated halls apart from Rathmore Street, all gained space. Halls that once fit into the space of a couple of terraced houses now possess striking amounts of space relative to the dwellings around them. This is likely to reflect the relative value placed upon space in an emptying city as population movement out of the area both allowed and necessitated carparks.⁴⁵ But it suggests that the establishment of a permanent space in an area of the city allowed for a position from which to defend and redefine the mission hall.

The scale of these new arrangements on the streets has left them visually separated, inaccessible within carparks, which become space that, during the week must be defended from commuters, playing children, or vandals. The carpark suggests that the link to locality that characterised the halls once has changed, as does the visual evidence for the growing popularity of the 'drive-in' gospel meeting.

The impression of a changing relationship to place is also apparent in the physical design of the mission halls and their boundaries. Halls have changed by developing more spaces for mediating between inside and outside. Thresholds and boundary areas accumulating defensive architecture, signage, and built spaces. Works on facades and porches present a material response to concerns about the relationship between hall and context, the 'welcome' of the hall. These spaces shelter social interaction, encouraging time spent conversing adjacent to official events. Work done here is an intervention that expands the range of social practices that can happen within the building, rather than on streets outside it.

Colm Heatley, "CAIN: Issues: Interface Areas: Interface, Flashpoints in Northern Ireland, n.d. Accessed July 10, 2022, https://cain. ulster.ac.uk/issues/interface/docs/heatley04.htm.

One of the principal ways in which the halls contributed to the visual character of their surroundings is through text. Texts are printed in the same way as the contemporaneous commercial signage. Different modes of textual display are apparent, from a more 'exclamatory' style in which texts are brief, large and designed for visibility, to a more intimate style, more likely to features serifs or calligraphic typefaces and more likely to include longer passages. Transience was apparent, with texts being updated, replaced or removed often, even within the period of study. Yet displays also remade the same content in updated forms. Creating and displaying text was one of the principle means by which the ongoing symbolic work of interpreting and reinterpreting the buildings was completed, the unambiguity of text anchoring the ambiguity of the building forms. Various levels of engagement with text were evident, from Parkgate Avenue, where active changes in the content and the style of text and interpretation of the halls itself were in progress to Canton Street where text was almost absent. These different levels may reflect different levels of necessity of material responses to problems of interpretation; perhaps the interpretation of Canton Street hall is simply more secure? They also reflect cultural differences, with the 'gospel halls' more likely to display text than other hall types. The same verses were used across different buildings, and were repeated at other smaller church buildings, punctuating journeys across the city with repeated messages, becoming a rhythm that accompanies day-today journeys. The display of text may have been the only evangelism prudent in a time of conflict, and so presents a particular visual confluence of the city's history of violence and of popular evangelicalism.⁴⁶

Conclusion

The research asked how change had affected the presence of mission halls as a component of Belfast's streets and their ability to relate to locality. Through triangulating documentary, visual and cartographic data, the paper examined three broad interactions with change: remaining, reintegrating, and displacing. In all the halls the inquiry

⁴⁶ Tim Grass, Gathering to His Name: The Story of Open Brethren in Britain and Ireland. (Partnership Publications, 2012): 474.

found evidence that the relationship with the locale has altered, reconfigured streets, alterations made to the halls and differing scales all adding or reacting to complexity to the relationships between hall and street. All of these provided problems to be solved, but also opportunities so that the interpretations of the halls could be maintained and updated. In this, mission halls, as spaces built through and aspiring to social interaction may be particularly sensitive to such changes.

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9.9999r?Utm_source=earth7&utm_campaign=vine&hl=en.

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The street and the block Reading the transition in Rimini, Italy

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Abstract

"An urban block is defined as that part of the city formed by three halfcounties with a marginal building on each street and typical hierarchies between the formative routes (matrix route, building layout route and connecting route)". Starting from Gianfranco Caniggia and Gianluigi Maffei in Lettura dell'edilizia di base, it is possible to define the object of the study in the context of the Italian historical centre urban regeneration: four urban blocks in Rimini's compact fabric. The main formal character that defines this urban structure is the buildings' conformation and road network surrounding and crossing the block. The studys' sample selection belongs to the four blocks' narrative capacity with the rest of the town, for their stratification and mixture of different urban typologies. For these reasons, it is possible to reflect on the logicalexpressive complementarity of two orders of characters: open/closed and compact/porous. Building/road relationships define the block within the urban environment and the hierarchy of the paths. The specific problems of the block in the urban context emerges as these relationships change. Subsequently, the permanences and permutations of this particular morpho-typological structure become evident. This research aims to analyse the transition of four blocks to trigger urban regeneration mechanisms.

Keywords

Block, street, urban morphology, urban rule

Reading for understanding

The simple construction of a building, the occupation of a space, and the demarcation of property constitute decisive actions for the urban environment, both for the individual and the community. It is a question of organising space to allow living conditions appropriate to the

place and time in which one acts: it is the process of transforming the territory, its buildings and the life that will develop around them. Each era of urban expansion has had its conception of the good city, its process and standards for city building.

Urbanisation takes place in a precise context, not only environmental and territorial but also social, of technical knowledge, specific to a particular area and a certain period. This means that the building methods differ according to the places and periods in which they occur. However, the actions of each time are closely connected to the previous ones, now imprinted in the spatial organisation. These actions remain in the artefacts and are of absolute importance since they constitute the references and models followed in the past, which are necessary as a source of knowledge and continue to serve as a model today². These references are made simultaneously at the urban and building scale, crossing the use and organisation of empty and built space.

By grasping the primordial relationship between site and settlement, the reading of its current form, the physical structure that constitutes it and the functions that are attributed to it are implemented. Reading the urban environment is concealed by the stratifications of man's works and by the modifications brought about by natural events or by the succession of regulatory and implementation provisions. From the concept of evolution for understanding urban dynamics comes Stephen Marshall's definition of a lens for looking at the city. Marshall argues: "the plan of a city – like the plan of a chess game in progress – is a snapshot of an evolving process. Two cities – or two chess games – may have different distributions of pieces, but these distributions often have a systematic local relationship, which gives them a recognisable order"3.

Based on this vision of the city and the way urban spaces are studied, this contribution focuses on analysing the urban form of the Italian historical centre with the purpose of modifying the existing rules to

Eran Ben-Joseph and Michael Southworth, <u>Streets and the Shaping of Towns and Cities</u> (Island Press, first edition McGraw-Hill, 2003).

² Giuseppe Strappa, (1995) Unità dell'organismo architettonico. Note sulla formazione e trasformazione dei caratteri degli edifici (edizioni Dedalo:Bari, 1995).

³ Stephen Marshall, *Cities*, *Design and Evolution* (Routledge: London, New York, 2008), 186.

allow regeneration⁴. The reading of the urban form bases its approach on the typological investigation of the diachronic recomposition in phases⁵. Using a diachronic approach allows understanding of the connection between the network of settlements and the territory and how this original structure was transformed through innovations that introduced new factors and new settlement models6. Based on these arguments, the transitional morphological approach highlights three principles (belonging to the Italian school of urban morphology⁷) that can be useful to modify the system of urban rules and renew the connection between the activities of studying form through the mapping of urban realities, and planning, through the definition of rules. First, existing anthropic structures result from a process based on diachronic and diatopic mutation8. Secondly, urban structures establish changing relationships with each other⁶. Thirdly, the structure and character of a city are the results of permanences and permutations at various levels9. Consequently, the road system represents one of the leading models to read and understand the urban structure of the contemporary city. Therefore, a key element in shaping cities has been ideas of what the street network should be since streets are a public framework that structures urban tissues and city life¹⁰.

⁴ This research stems from the request of the Municipality of Rimini (Italy) to provide a preliminary study of the urban form of the historical centre for the formation of the cognitive framework of the new General Urban Plan. The municipality goals were to foster private investment raising building capacity of the historical core; to preserve the local identity strengthening typo-morphological pattern.

⁵ The diachronic recomposition in phases refers to the method used by Saverio Muratori in *Studi per una operante storia urbana di Venezia* (1959), where the author reconstructs the urban development of Venice in phases, tracing the permanences within the urban fabric.

Marco Trisciuoglio, Michela Barosio, Martina Crapolicchio, Rossella Gugliotta, Ana Ricchiardi, Zeynep Tulumen, "TRANSITIONAL MORPHOLOGIES. Urban forms: generation and regeneration processes. An agenda", Sustainability 13, no.11 (2021), 6233.

⁷ Reference is made to the urban design-oriented studies on Venice by Saverio Muratori, on Como by Gianfranco Caniggia and on Turin by Augusto Cavallari-Murat.

⁸ Gian Luigi Maffei, Mattia Maffei, Lettura dell'edilizia speciale, (Alinea: Firenze, 2011).

⁹ Gianfranco Caniggia, *Strutture dello spazio antropico. Studi e note*, (Alinea: Firenze, 1975).

Eran Ben-Joseph and Michael Southworth, Streets and the Shaping of Towns and Cities, 2003.

This framework of studies raises some fundamental questions for the approach to the regeneration of the contemporary city. First, how to read the structure of the contemporary city in order to understand its evolution? How can the analysis of the road network and built patterns suggest an urban design? Third, how to regenerate the contemporary city by understanding the relationship between settlement and territory? Using as a model the studies conducted by Saverio Muratori on Venice, by Gianfranco Caniggia on Como¹¹, but above all the analyses for the Bologna and Palermo Master Plans conducted by Pier Luigi Cervellati, this study aims to answer the fundamental questions by analysing the historical centre of an Italian city, applying the same principles as the reference studies. The analysis of Rimini's historical centre (Fig. 1) allows two essential considerations. Firstly, to analyse the historical urban fabric, it is possible to use consolidated notions belonging to the Italian school of morphology. Secondly, the need to respond to practical requirements dictated by the new urban planning law of the Emilia Romagna region¹², which imposes the simplification of regulations to encourage urban regeneration. Considering these two assumptions, the reading of the structure of the historical centre is an essential operation for the knowledge of urban materials (Fig.2).

Rimini as a laboratory

The methodology adopted for the study of Rimini's urban form, also discussed with the Municipality, consists of four main steps. First, the

In this regard, see the Report of the Plan of Rules within the Territorial Government Plan of the City of Como. In particular, part 8.1 (from page 539–583) in which there are the critical reflections on the issue of the historical centre. Reference to the link: https://www.comune.como.it/export/sites/default/it/doc/pgt/piano-delle-regole/relazione-piano-delle-regole/xo.8.1xPgtPianoRegoleComo Pagine 539 583.pdf

Reference is made to the regional law of Emilia Romagna 21
December 2017, n. 24. The Italian regulatory system for territorial government is 'cascading', which means that a regional regulation coordinates the municipal norms and dictates the directives for territorial development. With this law passed in 2017 by the Emilia Romagna region (in which Rimini is located), it orders to simplify the regulatory apparatus of territorial government, bringing together municipal plans (Municipal Structural Plan, Operational Coordination Plan and Building Regulations) into a single General Urban Plan by 2023. To achieve this goal, the Municipality of Rimini has started the preliminary study shown in this article.



Fig.1 — Orthophoto of Rimini nowadays. In this picture, it is possible to recognise the historical centre in the middle, bordered to the north and south by watercourses, to the east by the railway line and to the west, the line of the ancient walls (now a road) is discernible. Source: open-access geographic tool with reworkings by the Author, 2022.)

analysis of the morphological patterns of the city and the formal transition of the historical core. Secondly, the identification of formal clusters within the urban fabric. Thirdly, the study of a sample for each cluster (through morpho-typological analysis) with a design simulation. Finally, the definition of regulatory guidelines to enable the increase of building capacity. The preliminary operation to the analysis of the urban fabric of Rimini is that of equipping oneself with the tools and techniques necessary to realise the complexity of the urban landscape. First, it is necessary to recognise that the visible aspect of the urban environment is the result of processes that are very different from each other in terms of logic and origins and that these processes intersect and overlap, leaving traces, albeit minimal, without any solution of continuity, defining the territory as a palimpsest that is gradually reworked¹³. These processes represent an urban scenario in which the transformations are hardly reversible and whose sum constitutes the fixed territorial capital, the principle and the constraint for the regeneration operations. In order to set operational goals on urban tissues, it is necessary to clearly define a certain number of elements that compose the urban structures of the historic centre. First, the structuring elements that are the components of the urban environment almost unchanged that constitute the identity of the historic centre can be identified with the street pattern and with the hydrography and natural elements. In this category, of primary relevance is the street layout of the Roman matrix (Fig. 3) since it persists in the urban structure together with the wall layout, which has now mostly disappeared, marking a clear-cut caesura between the historic and 'expansion' fabric. Secondly, settlement systems, i.e. urban agglomerations, interdependent on structural elements and respond to internal rules. Morphological clusters are part of the settlement systems, defining a collage of areas characterised by specific densities, plant structures and prevalence of building types.

On the basis of the concepts just mentioned, this research proposes the identification of five morphological clusters in Rimini's historical

¹³ André Corboz "The Land as Palimpsest", Sage Journal 31 no. 121 (March 1983), 12–34.



Fig.2 - Map of Rimini with streets and infrastructures highlighted in the historical centre of Rimini. In grey, the river. Source: Author, 2022.)

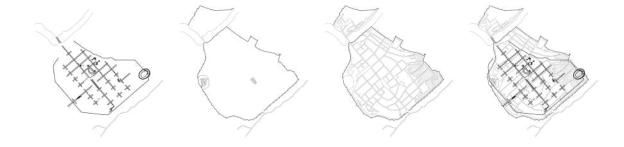


Fig.3 – Map of Rimini in its morphological development: Roman settlement, Renaissance additions, Gregorian Cadastre of 1811, overlapping maps. This image shows how the road structure of the early Roman settlement persists in the modern and contemporary structure of the city of Rimini. Source: Author, 2022.

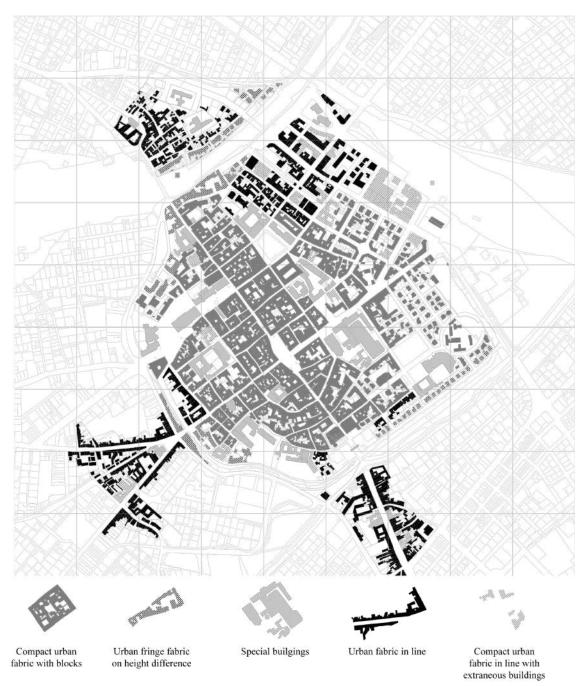


Fig.4 – Morphological clusters in the historic centre of Rimini. Source: Author, 2022

city centre: compact fabric with blocks and stratifications, compact fabric with the presence of special buildings, fringe fabric with height differences, fabric with buildings arranged in a line, fabric with buildings arranged in line with the presence of units extraneous to the urban environment (Fig. 4). Studying the compact urban fabric with blocks and stratifications represents an opportunity to understand the relationship between the form of the city and the street. In the following paragraph, the urban shape of the four central blocks of the city of Rimini is studied through its evolution and its relationship with the hierarchy of the roads.

Dichotomies and links between open/closed and compact/porous

In this section, the analytical part of the research is presented. In particular, the sample of a morphological cluster (compact urban fabric with blocks and stratifications) is shown. The discussion is developed according to the following points: description of the study object (location and form), study of the relationship between the block and streets, design hypothesis linked to the concept of urban porosity.

The four blocks under analysis (Fig. 5) are located between two urban poles: *Piazza Cavour* and *Piazza Tre Martiri*. The polarity of the squares derives from the historical stratifications that, over time, have consolidated their attractive role as centres of commerce (such as the old Forum in Roman times, now *Piazza Tre Martiri*) or centres of power (such as *Piazza della Fontana* in mediaeval times, now *Piazza Cavour*). The presence of the two attractive poles, which were formed at the same time as the special buildings¹⁴ of the *Palazzo del Podestà* or *Palazzo Brioli* (clock tower), reflects the polarity of the four study blocks, which are made up of different layers and represent a development model that can be found in other areas of Rimini's historical centre. However, the study of the blocks requires a clarification of terminology in terms of urban morphology: "An urban block is defined as that part of the city formed by three half-counties with a marginal building on each street

The concept of "special building" as well as the concept of "polarity" are extensively discussed in the widely cited publication: Caniggia, Gianfranco, Gian Luigi Maffei, and Nicola Marzot. *Interpreting Basic Buildings* (New Revised ed. Firenze: Altralinea, 2017)

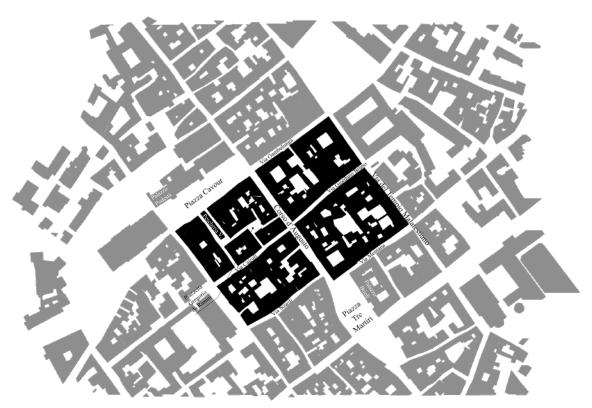


Fig.5 – Map of four blocks with the indication of streets and main squares. Source: Author, 2022.

and with the typical hierarchies between the formative routes (matrix route, building layout route and connecting route)"15. Taking up Gianluigi Maffei's words, it is possible to clearly define the object of study, i.e. the sample of the four urban blocks, which are characterised not only by the conformation of the buildings but above all by the road network that surrounds and crosses them. Streets and routes are a fundamental element of morphological analysis, which is usually only associated with the study of built form. Despite being an empty space within the urban structure, the street constitutes the structure and defines the hierarchy in the urban analysis. Within the urban fabric of Rimini it is possible to identify three types of routes: matrix routes, building layout routes and connecting routes. Therefore, the traceable matrix routes are Corso d'Augusto, Via del Tempio Malatestiano (Fig. 5), and the building layout routes are the streets perpendicular to the matrix routes (Via Cairoli and Via Giordano Bruno, Via Soardi and Via Mentana). Finally, the connecting routes are all the alleys inside the boundaries of the block (Fig. 5).

However, the current configuration of the blocks derives from the stratification of different compositions that have followed one another over time. The layout of the four blocks in Roman times consisted of a system of lots with open series of appurtenant courtyards; there were special structures such as the Roman theatre and peristyles in the north-eastern block, the *horrea* (or public warehouses in Roman times. The Latin term has the meaning of granary, but the buildings that had this name were used for the storage of different types of goods) in the south-west, temple and *quadriporticus* in the south-east block¹⁶. There was a reuse of the Roman lot system in the mediaeval phase introducing the merchant court type. In the north-eastern block, as shown by the studies of the architect Edoardo Preger in 1988¹⁷, the progressive clogging of the road system and partial shifting of the connecting route were caused by the decay of the adjacent Roman theatre (Fig. 6). In the

¹⁵ Gianfranco Caniggia, Gian Luigi Maffei, Composizione architettonica e tipologia edilizia. 1. Lettura dell'edilizia di base, 136.

¹⁶ Grazia Gobbi, Paolo Sica, Le città nella storia d'Italia. Rimini, (Laterza: Bari, 1982).

Edoardo Preger, Morphological studies for the construction of the new General Plan of the city of Rimini, 1988.

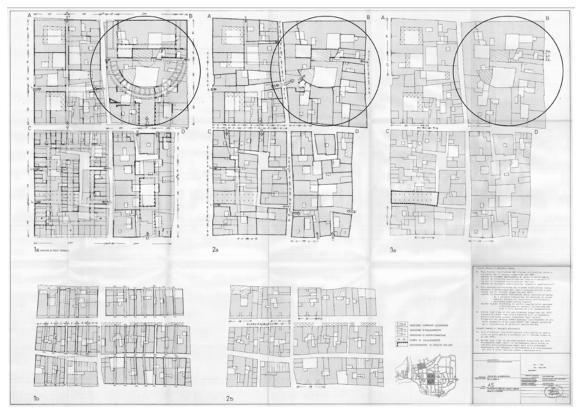


Fig.6 – Edoardo Preger 1988, Morphological studies for the construction of the new General Plan of the city of Rimini. Source: Rimini's Archive, 2020.

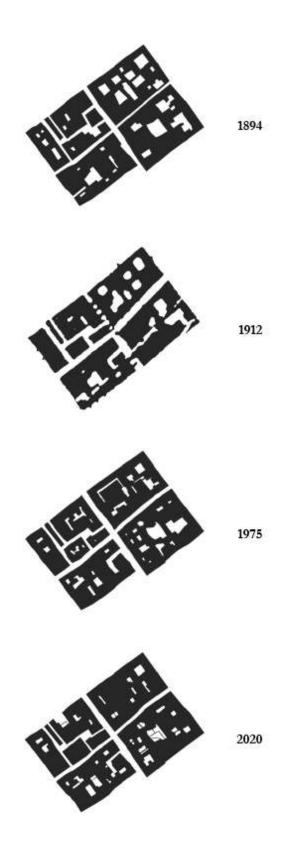


Fig.7 – The transition of the four blocks. Source: Author on the basis of historical cartographies, 2022.



Fig.8 – Example of a building that respects the block morphology but presents modernist canons. Piazza Cavour, 1, 47921 Rimini RN. Picture. Source: Author, 2020

other three blocks, the reuse of special buildings by introducing synchronic variants of the merchant court type and pseudo-shelters is noticed. In the urban situation photographed by the Gregorian Cadastre of 1811, it is possible to trace the clogging of the system and connecting roads with the consequent definition of the current dimensions of the block. In addition, it is possible to notice the formation of the urban palace through the amalgamation of several merchant courts with the first gutting of the residential fabric to introduce *special buildings* (Fig. 7).

The curtain layout of the four blocks continued in the years following the Gregorian Cadastre, except for the *Pescheria Vecchia* lot, overlooking *Piazza Cavour*, which was freed of the adjacent superfetations. Another sign of transformation is the system of internal courtyards. These underwent changes in size and form after World War II due to the bombings and the subsequent construction of residential buildings on the edges of the blocks. The buildings constructed on the bombed-out plots conform to the general morphology of the four blocks. However, they have architectural characteristics that differ from the pre-existing ones regarding materials and architectural style. For example, ribbon windows, plastered facades and flat roofs create a visual detachment from immediately perceptible context (Fig. 8).

The urban morphological layout in the form of a block and the road layout are concepts compared with the courtyard building typology as a measure, module and principle of aggregation and as a minimum unit within the city's design. The four blocks of the sample were selected because of their narrative capacity concerning the rest of the city and their stratification for the mixture of different urban typologies and materials. For these reasons, it is possible to reflect on the logical–expressive complementarity of two orders of characters: open/closed and compact/porous. Above all the relationships, the distinctive features of the courtyard type emerge from studying its relationships with the city and with the form of the fabric. Building/road, interior/exterior, and public/private are the relationships that, decomposing and recomposing, define the courtyard type within the urban environment. As these relationships change, the specific problems of the courtyard residence in the urban context emerge, and the permanence and permutations of

this particular morpho-typological structure become evident. Therefore, three of the four blocks can be defined as closed urban organisms, i.e. they maintain a clear, defined, impenetrable boundary.

In contrast, the block to the northeast presents a semi-open system due to the presence of the *Pescheria Vecchia* and the *Piazzetta Gregorio da Rimini* (Fig. 5). As a result, the courtyard loses its function as a domestic "backyard" and becomes part of the urban square. The perimeter block relates to this inversion by remodelling its physical consistency and rewriting the relationship between its solids and voids. The porosity of a residential courtyard model, or the biunivocal relationship between mass and permeability, can create new spaces, dematerialising the boundary and the envelopes and re-defining the void (the street, the circulation space) as an architectural presence.

The analysis of the block, its paths, polarities, porosity, and development allows an understanding of the limits and possibilities of action on this urban conformation. The "solids", i.e. the buildings, are almost untouchable, except for restoration work¹⁸. The work on the voids, or instead on the spaces of circulation, allows a series of spaces for manoeuvre.

So one of the possible prefigurations is to act by micro-interventions, also considering a limited time dimension and a reversible arrangement (Fig. 9). Hence the awareness of establishing a sort of abacus of urban elements to be inserted in the circulation spaces (i.e. collective or private courts, roads within the block, paths, etc.).

The project is thus understood as a catalyst, an accelerator of dispositions; it is seen as one of the possible configurations of urban development¹⁹. Above all, the project's vision in the urban regenera-

In the Executive Urban Regulation of the Municipality of Rimini the buildings in the historic centre are classified according to value categories to which an intervention category is associated. See Table RUE 2–3 of Rimini Municipality's Executive Urban Regulation. In the study blocks, with the exception of buildings rebuilt after the Second World War, most of the buildings only foresee conservative restoration.

¹⁹ Pasquale Mei, Il tempo della simultaneità nel progetto urbano. Tra permanenza e mutazione (Maggioli Editore: Segrate Milano, 2015).

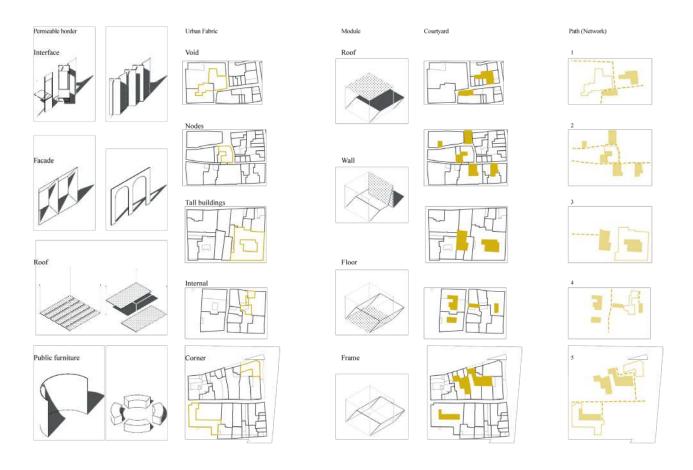


Fig.9 – Guo, Liqiuzi, Abacus of temporary structures for the circulation spaces in the blocks. Source: Master Thesis by Guo Liqiuzi, 2021.

tion of Rimini's historical centre is understood as incremental: not as a formal or normative dogma, but as a sum of operations distributed over time that does not return an immediately predictable image. Given the formal characteristics of the study area, it is possible to deduce certain design orientations aimed at maintaining the identity of the sites and oriented towards increasing building capacity. One of the possible solutions that this research is experimenting with is the formulation of an abacus of temporary structures to be inserted within the circulation spaces (internal roads) of the blocks. For this purpose, the north-east block is the most porous and most suitable for experimenting with a series of design solutions. Nevertheless, the inner (private) courtyards of the other blocks can also provide temporary spaces used by the community. In addition to this, the buildings reconstructed after the Second World War, both in terms of façade redesign and the use of flat roofs, provide a design opportunity (Fig. 9).

According to Giuseppe Samonà, the figure's construction is a synthetic and essential procedure to arrive at the first signs of the project, which are still purely iconic. The space, represented by the figure, connoted more than described, manifested more than drawn, speaking more than spoken, becomes a metaphor of the intermediate between demand and architectural project, between the description of the context and prescription of the project; it is a metaphor of the intermediate passage, of that ferrying of the number of numbers of an urban plan into quality and definition of the character of the material of the urban composition and the relative architectural project.

The results discussed in the following paragraph represent the transposition of the reasoning around the compact fabric with blocks and stratifications and its relationship with the road (the void) on the level of urban design and the deduction of rules for the regeneration of historical fabrics with the same characteristics.

An urban code matrix based on form

In inter-scalar reasoning, or sometimes in this transcalar analysis, the choice to analyse urban fabric samples is instrumental in verifying

whether the reasoning conducted *a priori*²⁰ can be applied more or less effectively to the existing urban fabric. Hence the awareness of being able to export the reasoning carried out on a sample to the remaining urban fabric, which presents the same morpho-typological characteristics. However, it is possible to set up a preliminary matrix to define the knowledge base for reformulating and sometimes overcoming the existing rules to improve the building capacity in the historical centre. The table proposed in this article concerns the summary of the analysis conducted on the four sample isolates. Within this synthesis are represented the formal requirements of the morphological clusters (IF), the possible actions on the urban tissues with the subject that can carry out the regeneration actions (IS PERMITTED), the benefits for the subjects involved (ADVANTAGES) and finally a draft of the operations allowed in each situation (LIMITS/QUANTITIES). So IF there are conditions of compact building fabric with blocks and stratifications (on the shown sample), IT IS PERMITTED to rethink the urban space to allow porosity through:

- interventions on the system of voids in inner courtyards (temporary and reversible);
 - interventions on the surface of facades;
 - interventions on the surface of roofs;

through promoters: private citizens, with the ADVANTAGE of receiving discounts on environmental taxes, being able to carry out operations within the LIMITS of

- occupation of private land by the public on a two-year concession;
- interventions on building envelopes and roofs (or solar slabs) in compliance with the typology.

IF	IS PERMITTED	ADVANTAGES	LIMIT/QUANTITY
There are conditions of compact building fabric with blocks and stratifications	To rethink the urban space to allow porosity through: - interventions on the system of voids in inner courtyards (temporary and reversible); - interventions on the surface of facades; - interventions on the surface of roofs; Promoters: private citizens	Receiving discounts on environmental taxes	 occupation of private land by the public on a two-year concession; interventions on building envelopes and roofs (or solar slabs) in compliance with the typology.

Fig.10 – Table of rules set. Source: Author, 2022.

[&]quot;Reasoning conducted *a priori*" refers to the concept developed in the first paragraph of this article regarding the connection between urban form and regulations.

This reading method, applied to all the other morphological clusters defines relations between spaces, subjects, and possible guidelines for developing Rimini's historical centre.

The study of the street pattern defines the structure, the boundaries and characteristics of the built environment, playing a role of primary importance in architectural design and thus representing the guide on which the urban fabric bases its reasons²¹. The operation carried out on the urban fabric of Rimini is to make the architectural project a research tool to investigate the urban scenarios and to be the outline for a set of rules. Supposing that urban regeneration is seen as a gradual rather than a single event, it can gradually take shape based on existing qualities. As a result, it is easier to respond to unforeseen and unpredictable social dynamics. The gradual approach to development contrasts sharply with the conventional approach, which assumes one big step towards a predefined situation or final position, known as urban planning. As a result, planning no longer produces a static and permanent outcome but outcomes permanently in a state of flux²².

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The street as a layer representing transitional processes

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Abstract

The map is the representation tool used in urban morphological studies to make the transition process of city tissue explicit. The urban transition process in analysis occurs through catalysts that have a tangible impact on the urban fabric. Therefore the city is a complex system and its representation needs to be decomposed into parts: the blocks, the streets, and the buildings that all together compose the urban tissue. The following contribution focuses on studying the systems of representation of transition through analysising the maps used by the master of urban morphology school in Italy. In this context, the street and its identification in maps highlight the limits of urban changes. The

resentation of transition through analysising the maps used by the master of urban morphology school in Italy. In this context, the street and its identification in maps highlight the limits of urban changes. The research is conducted on Venice's map by Saverio Muratori (1959) and on Como by Gianfranco Caniggia (1973), which shows how different methods of representation of the street system lead to different understandings of the historical stratifications and thus the transition of the city.

As a connecting element represented within the map, the street allows us to relate the different scales of the city. Besides reflecting on the street within the map as a system of representation of the urban layers, the analysis sets the goal towards different representation systems able to recompose what was previously decomposed: the diagrams. The methodological outcome provided through a critical analysis of the studies defines the street as a tool to read the urban systems.

Keywords

Representation, urban morphology, maps, diagrams, tool

Reading the contemporary city as a process

The contemporary city has been described in different ways during the last century: from "World city", "Megalopolis", "Generic city",

"Cybercity", "Network city" to "Postmetopolis" and "Smart city"1. From the modern movement to nowadays, the cities' concept has been increasingly associated with the one of space and time, defining the urban tissue as an entity in constant transition and transformation². The above words (transition and transformation) include the concept of dynamism and allow us to understand the city as a system made by catalytic elements leading to a change. These elements aim to transform the shape of the built environment, and its administration, over time and vice versa.3 In this analysis context where the term dynamicity is mentioned, there is a continuous change from one state of equilibrium to another. An equilibrium that cannot be defined as an exact moment in time. Moreover, it is a process of reaching the point of stability with continuous change. 4 In the transformation process mentioned above, it is possible to recognise a sequence that moves it slightly from the present state of an organism to the next one. As the change occurs, the field of action changes itself. Thereby, the same transformation, guided by the same rule, has different effects each times. 5 In this context, the passage from one state to another is identified as a process of transition characterised by the presence of static elements, the invariants, and dynamic elements, the permutations, which interact with each other at different urban levels. The multi-scalarity of transformations highlights the importance of identifying the characters of mutation to suggest a meaningful change in the city pattern for both the architectural and urban fields.

The study proposed here investigates how a transitory process of form, in continuous becoming, can be read, represented and visualised without losing its high component of dynamism and complexity. To do this, the interest of the research falls in the methodological/instru-

¹ Pinzon Cortes, Camila Eugenia. "Mapping Urban Form. Morphology studies in the contemporary urban landscape". PhD Thesis, TU Delft, 2009.

Wowo, Ding, Arie, Graafland, Andong, Lu. Cities in Transition: Power, Environment, Society. Rotterdam: NAIO10 Publishers, 2015.

³ Easterling, Keller. Lo spazio in cui ci muoviamo. L'infrastruttura come sistema operativo. Milano: Treccani, 2019.

⁴ Neyant, Frédéric. *The Unconstructable Earth.* An Ecology of Separation. New York: Fordham University Press, 2019.

⁵ Christopher, Alexander. *The timeless ways of building.* New York: Oxford University Press, 1979.

mental field through the investigation of mapping systems and their possible semantic alterations. However, the specific focus stands on two point: the street as a medium representing urban transition and the concept of the city as a system coming from the studies of Italian morphological school.

Analysing the simple components of the city and their composition in complex systems leads to the construction of readable sequences through the axis of syntax and the paradigmatic one. ⁶ On the other hands, observing the elements of the city by mapping lead to the identification of the reading subject (street) and its description and its perception of space and time (reading the city to understand). This observation brings the attention back to the morphology of the territory and the urban fabric but without avoiding perplexity. Studying dynamic systems and identifying forms within a temporal unit bring morphological knowledge into a crisis. Specifically, morphology enters into crisis when the image of a form recognised as ideal clashes with the representation of its change. ⁷ Therefore, the question arises of how a different representation of a map of a static element, the street, can lead us to understand the city differently, contributing to the project through different degrees of transformation.

Maps to represent transition

In architecture and urban analysis, "reading" can be considered a practical action to achieve a specific goal; to read is necessary to identify a critical tool that allows the action to be operative. In this case, "to read" is understood as an act of discovering transitional processes that bring to the surface the hidden dynamic mechanisms and the formal components of the change of state. The process of reading the city aims to represent and visualise the configuration of the urban tissue. Representing architecture means developing a system of signs and symbols to reveal a new reality of the city.

The map is one of the representation systems used in architecture and urban design to show a particular configuration of the urban tis-

⁶ Viganò, Paola. *La città elementare*. Milano: Skira, 1999.

⁷ Vercellone, Federico. Glossary of Morphology. Lecture Notes in Morphogenesis. Switzerland: Springer Nature, 2020.

sue. The map as a tool can study a given arrangement of elements at a given time. Already Filarete marks a changing point in the urbanistic theory considering the city as an architectural object. In his representation, the project on the map is made by plan with street, architectural typology, explanatory text and caption of the project. 8 Furthermore, morphological studies went beyond this first theory of the city as an architectural object. They tried to identify the elements of urban change using the map as a tool. The concept of transition, often indistinct from that of transformation, defines the change between one regime and another by passing through two different states of equilibrium. 9 It has the meaning of a process explained through a non-linear, dynamic transition that can be supported or hindered by an external system.¹⁰ Transition as a phenomenon related to process, and consequently to time, is peculiar to urban analysis when the research objective concerns investigating changes in the city. Morphology, is the study of a form in the making.¹¹ For this reason, it is necessary to operate through instruments capable of reading, representing and visualising dynamism.

The Italian morphological school developed in the Sixties under linguistic structuralism provided the first interpretation of transition through the maps of Saverio Muratori (1959) and Gianfranco Caniggia (1963). Muratori and Caniggia's maps follow the principle of "an overlay on different layers that define the evolution of a specific part of the city". Furthermore, in "Elsewhere mapping" (2006), Peter Hall acknowledges the recent apogee of mapping. This medium has become a valuable instrument to combine information and visualise it to under-

⁸ Finotto, Francesco. Città chiusa. Storia delle teorie urbanistiche dal Medioevo al Settecento. Venezia: Marsilio, 1992.

⁹ Kemp, René, Marjolein van Asselt, and Jan Rotmans. "More Evolution Than Revolution: Transition Management in Public Policy". 2001. http://hdl.handle.net/1765/7672.

¹⁰ Hölscher, Katharina, Julia M. Wittmayer, and Derk Loorbach. "Transition versus Transformation: What's the Difference?" *Environmental Innovation and Societal Transitions* 27 (June 2018). Elsevier B.:1–3. doi:10.1016/j.eist.2017.10.007.

¹¹ Kropf, Karl."Aspects of urban form" *Urban Morphology* 13, no. 2 (2009), pp.105–20.

Hall, Peter. Mapping the next millennium: the discovery of new geographies. New York: Random House, 1992.

state complex situations and reveal new relations. It recognises the potential of mapping as a way "to make the complex accessible, the hidden visible, the unmappable mappable." ¹³ In this way, starting from the definition of the map, the process of reading the morphological school can be compared to a diagrammatic method. ¹⁴

By decomposing the map of Venice (Saverio Muratori) and Como (Gianfranco Caniggia), it is possible to define the temporal, symbolic and diagrammatic components that make these maps a tool for studying urban change. These morphological maps are characterised by a diachronic and synchronic component that defines the time component in the study of dynamism. Furthermore, they use symbols and signs to identify permanence. However, at the same time, they present an implicit diagrammatic character that can be used to study permutations. A transition map can represent the dynamic component, albeit with certain rigidity. With the approach focused on understanding how the city changes by linking past and present, maps can be seen as diagrams showing the evolution of collective thinking about a particular spatial domain. In this new representation system, the street is merged with the ground floor of the building without a specific differentiation but, at the same time, implicitly declines its principal role as a stratum representing the structure of the urban tissue.

Analysing street representation

The street, or as Gianfranco Caniggia calls it, the path, is an essential attribute on which the system of representation of the map is based. Path and band of relevance are the two categories used to identify the structure of the urban tissue. The relation between streets and buildings defines four different configurations of the process of formation of the urban tissue:

Abrams, Janet, Hall Peter. *Else/where mapping. New cartographies of networks and territories.* Minneapolis: University of Minnesota, 2006.

Trisciuoglio, Marco, Michela Barosio, Ana Ricchiardi, Zeynep Tulumen, Martina Crapolicchio, and Author. "Transitional Morphologies and Urban Forms: Generation and Regeneration Processes—An Agenda" *Sustainability* 13, no. 11(2021): 6233. https://doi.org/10.3390/su13116233

¹⁵ Caniggia, Gianfranco, Maffei, Gian Luigi. Lettura dell'edilizia di base. Venezia: Marsilio, 1979.

construction on matrix path; construction on building layout routes; construction on linking routes; construction on renovation routes.

From the consideration above, it is easy to understand conjecturally how the urban tissue was formed during the time and how much the street pattern is linked with the city's structure. The city's reading is based on understanding the street pattern from a theoretical perspective. However, the practical use of the maps to understand the urban transition raises some questions about the representation of stratification that the Italian morphological school is analysing through comparison of different phases.

To identify how the street declines the city's reading inside the map, attention is paid to two research studies from the Italian urban morphology study tradition. The work on Venice by Saverio Muratori collected in his book "Studi per una operante storia urbana" (1959), and the one on Como by Gianfranco Caniggia collected in "Studi per una città: Como"17 (1963). The reason why of the two case studies comes from its important role into the definition of a methodology to study the city. The research on the maps of Venice and Como starts from the necessity of improve the existing method through innovative tools able to ride the urban transition inside the city and provide a vision helpful for further transformation. The focus on the street of the maps of Venice and Como helps to define a tool based on recognising the city's permanence and structure without defining a rule of evolution. The street is an essential part of the city that changes slowly over time, which is helpful for comparing different phases. There is no settlement without a route, a precedent that generates it. On this consideration, the building fabric takes on precise characteristics: the modularity of the occupation of the street front, the thickness of the built-up area, and the orthogonality concerning the road axis.18

Muratori, Saverio. *Studi per un'operante storia urbana di Venezia.* Roma: Istituto Poligrafico dello Stato, 1959.

¹⁷ Caniggia, Gianfranco. *Lettura di una città: Como.* Roma: Centro Studi di Storia Urbanistica, 1963.

¹⁸ Caniggia Gianfranco. Strutture dello spazio antropico. Studi e Note. Firenze: Uniedit, pp.69, 1976.

The question arises from the confrontation of two different case studies that define the street as a critical element of the city's structure. From the analysis of the two maps, it is possible to see that if we give another kind of representation, we have another understanding of the city transition opening the field of design to multiple scenarios. The different systems of representation lead to a different interpretation of the city. The comparison considers the specific case study of Muratori in Venice (San Bartolomeo neighbourhood) and Caniggia in Como (sample of phase II, via Rovelli). The methodology used for the analyses is based on redrawing the phases of the transition maps, emphasising the representation of the street. Therefore, the reading process is based on understanding the different sources (maps and text), secondly, on the interpretation of the single element related to the entire system.

First, the maps is been decomposed in the single phases defined by its author, than, for each phases are defined the microphases: the small transformation that occur during the time span emphasising the structure of the street. The highlighting of the street pattern helps to understand how much the relation between street and building shape the understanding of the transformation. Moreover, one of the focal point is to highlight the street in the representation of the new medium as new interpretation of the structure of the urban tissue.

Venice. San Bartolomeo (Saverio Muratori)

The map of Venice realised in 1959 is made by drawing the transformation of the urban tissue by layer in time. In the specific case of San Bartolomeo, it was possible to analyse the maps representing the four phases of the Venetian expansion:

Phase I. The 11th and 12th centuries comprised the parish construction phase and the late Byzantine expansion.

Phase II. During the 13th and 14th centuries, the late Byzantine settlements were consolidated, and expansions were set up in the island's northern part.

Phase III. In the 18th century, the mediaeval buildings were replaced by masonry structures identified on the map with white backgrounds.

Phase IV. It is the current phase. There have been few changes since phase III, mainly concerned with the representative buildings and the









Fig.1 – Redrawing of San Bartolomio by Saverio Muratori – Studi per un'operante storia urbana (personal rielaboration): Rossella Gugliotta 2022.

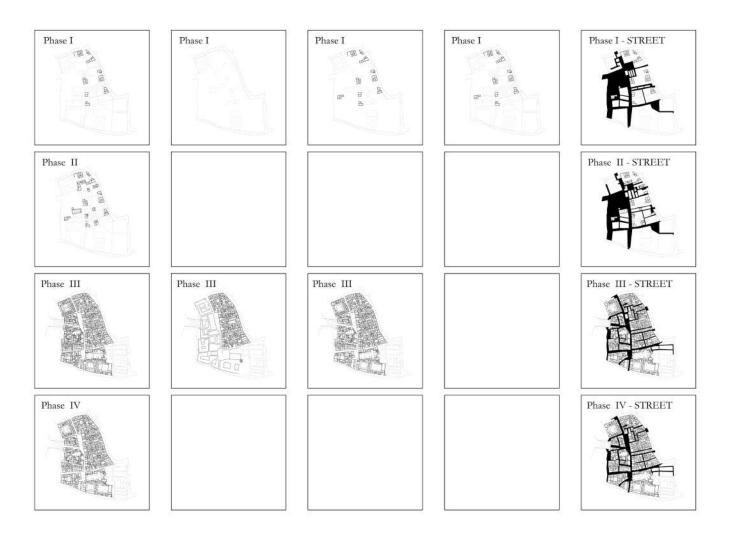


Fig.2 – Decomposition into part of San Bartolomio maps with a focus on street pattern – Studi per un'operante storia urbana (personal rielaboration): Rossella Gugliotta 2022)

connections with the other islands. (Fig.01).

The map shows the ground floors with information from cadastral maps and field surveys. In the first redrawing phase, it is essential to recognise the symbology used by the map and define, through hypotheses, the micro-phases of transformations that each map contains. In fact, because of the dilated time of each map, it is possible to identify small expansions within the individual phases above listed. The aim is to bring the information together in a representation system that considers exploring the time component and allows the information to be displayed simultaneously, thus avoiding graphic approximations and limiting the subjective interpretation of the map.

In this case, by decomposing the maps into more micro-phases, it is possible to see how the street is represented as a space resulting from the construction of the buildings. The comparison between the existing tissue and the new one is also not made on the street path but directly on the relation between closed and open space. In fact, on the map of San Bartolomeo, there is no trace of the street as a single element of the urban tissue. Moreover, it is recognised as the space that intercurred between the buildings. Therefore, despite not being highlighted in the original maps, the street can be understood as an essential element for defining the urban structure and its change. The structure of the urban tissue (the permanence) is not wholly defined in the original maps, but it is understandable. Recognising the street as a structure and highlighting its pattern are the results of reading and understanding the maps of San Bartolomeo (Fig.02).

Como. Sample of Via Rovelli (Gianfranco Caniggia)

The map of Como drawn up for Caniggia's study at the beginning of the 1960s is presented as a succession of layers that make up the expansions of the city. The study of the Roman camp defines the period analysed by Caniggia. In turn, it is divided into five phases of expansion:

Phase I. Roman settlement or Castrum Marcello phase.

Phase II. Roman settlement or phase of the Castrum of Cn. Pompeo or colony of C. Scipione.

Phase III. Novum Comum.

Phase IV. Polarisation towards the lake or imperial complexes.

Phase V. Early medieval belt.

A cartographic analysis is carried out, which always relates the reconstruction of the Roman Castrum to the present-day fabric (of 1963) to understand and read the permanence within the urban fabric. Moreover, in Caniggia's construction method for each phase are taken some samples on a smaller scale to explain the relation of the past structure of the Domus with the courtyard house of nowadays Como (Fig.03).

The importance of the street is fundamental to understanding how the urban pattern has been modified from the roman castrum to nowadays. From this, it can be seen that permanence (structures and streets) can be recognised on a building scale. The analysis of Como aims to identify the variations between one arrangement and the next one. In the redrawing, this feature is emphasised. The maps are constructed by identifying the last plan (the present one), relating it immediately to the first phase, and then moving towards the subsequent growth. Unlike Muratori, who proceeds backwards by subtraction, Como's map is generated by adding transformation parts.

For Caniggia, the map is primarily based on structure. For this reason, the plan for the current situation is made by defining street patterns. How the streets overlap with the roman reconstruction and generate relationships can explain how the city changes. The streets in this specific representation method are the map's structure, the representations structures, the city's structure, and the transition phenomenon structure.

Proceeding with Como with the same decomposition of Muratori maps in micro-phases, it is possible to recognise the importance of the street as the first layer to conjecture on urban transformation (Fig.04).

Different representations for a different understanding

The analysis conducted in this research considers the city as an interconnected system of space¹⁹ representing the urban structure. Both Muratori and Caniggia defined the city made by a structured object

Marcus, Lars. "The emergence of second form: the urgent need for the advancement of morphology in architecture". In *The morphology of urban landascape*. History Analysis Design, edited by Andri Gerber, Regula Iseli, Sefan Kurath, Urs Primas, pp.77-86. Berlin: Reimaer, 2021.

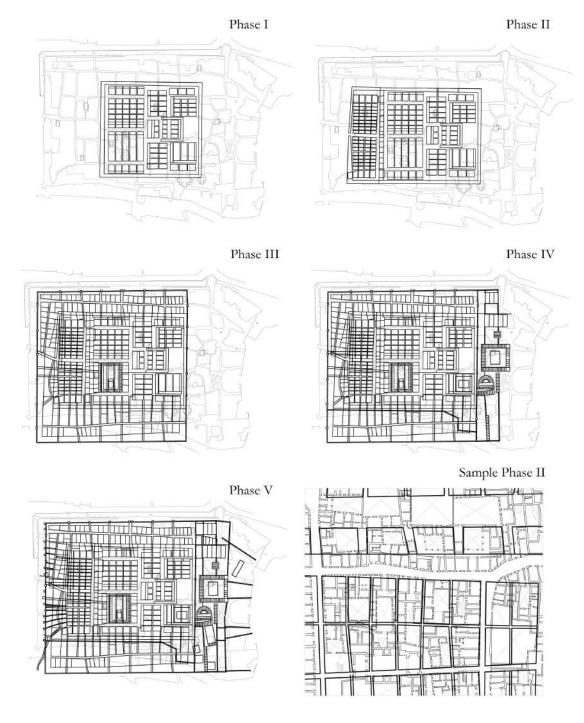


Fig.3 – Redrawing of Como and via Rovelli (sample II) by Gianfranco Caniggia – Studi di una città. Como (personal rielaboration): Rosella Gugliotta 2022)

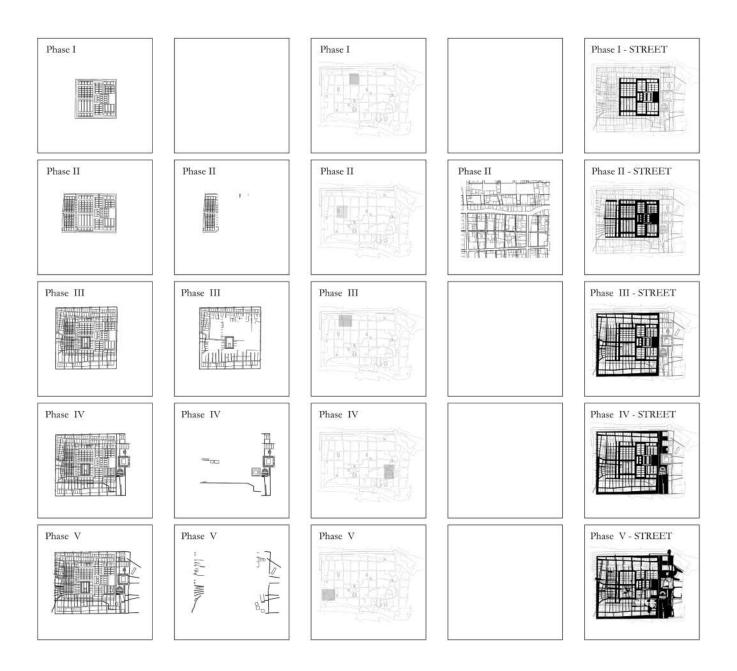


Fig.4 – Decomposition into part of Como maps with a focus on street pattern – Studi di una città. Como (personal rielaboration): Rossella Gugliotta 2022)

defined by the street. However, only Caniggia stresses the concept of the representation of the road inside the maps of comparison of different phases of transition. The importance of the street allowed Caniggia to reconstruct the city patterns and to understand the relation between the development of the street network and the overlapping of different stages. Instead, in the map of Muratori, it is more difficult to understand the structure of San Bartolomeo because the streets are not drawn but are shown in contraposition with the built area.

That is one of the points that can open up some new questions on the layer of representation of the city.

The map is a powerful instrument to define the city's structure. Nevertheless, it is necessary to redefine a system of representation that brings the street as a hidden layer into a more complex and complete representation of the new reality. Considering these two case studies that have been previously analysed, it is possible to define some variables of the map that show how the representation of the dynamicity can be reshaped and represented through a diagrammatic process.

The analysis brought the decomposition of various maps into parts. However, it is necessary to recompose them by developing instruments that consider the street as an element showing the structure and the city's permanence. The starting point of the new output is considering the method of representation of the two case studies. From the street, as an element shown in the maps is possible to stress how another representation method can lead to different understandings. In this process, the diagram enters the process of analysis, showing the street's function as the space's structure. In the first case of Muratori, the street is just what is not building; in Caniggia, the street represented in the maps defines the formal structure of the urban tissue. Testing the cases studies into a diagram is possible to declare the function of the street in identifying the structure and as a generative element composing the variable of permutation of the city. As much as there is a tendency to decompose the city into parts is not possible to define a single element. However, the general overview of the system brings knowledge about the city.

It is possible to represent the city differently highlighting the street pattern as a permanent element inside the city, and as information about its transition. The diagram does not aim to show a specific representation. Its construction is made by decomposing the micro-phases in the zone of transformation where the main change occurs. Then each transformation zone is related with two axes: scale and time. For each part of the city, it is possible to recognise the relation between the scale of transformation, time and other parts of the city. In the output of the diagram, there are two rows, one of permanence and one of permutation. In the row of permanence, it is possible to recognise the structure of the street. In the row of permutations, it is possible to define which changes in street configuration also define a change in the urban tissue. Defining the street of San Bartolomeo as a specific element in recognition of its permanence put a new accent on the element previously hidden on the map (Fig.05).

Conclusion

For contemporary cities, time becomes indeterminate: a time that can no longer be contained within pre-established movements.²⁰ The built environment (as well as the street) becomes a pattern in time; therefore the idea that the urban system is explained in static terms becomes limitation. In its transformations, the system is challenged. The composition of the different elements of the city is always something different from the sum of the parts. The dynamic element takes on such importance that it is not enough to study the city from a single point of view. However, it is necessary to analyse transformation causes by undertaking diachronic and synchronic investigations. This subdivision opens up the need for a multi-scalar and multi-dimensional approach to understanding transition by questioning the value of the tools used to represent and visualise it in its dynamism.

Paul Virgilio has pointed out that the representation of the contemporary city is no longer determined by the definition of monumentality nor by the succession of streets and avenues. Moreover, from now on, architecture must deal with the advent of technological space-time. ²¹

Abstraction is placed by different degrees of interpretation and read-

²⁰ Rajchman, John. Construction. Massachusetts: MIT, 2000.

Allen, Stan. *Practice. Architecrue*, *technique* + *representation*. New York: Routledge, 2009.

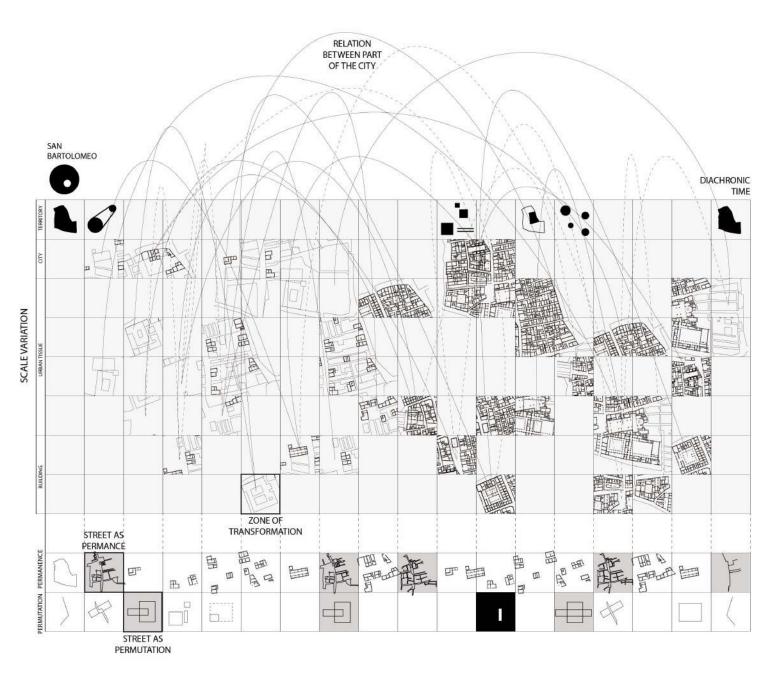


Fig.5 – Diagram representation of San Bartolomio with emphasis on the street as structure – Rossella Gugliotta 2022)

ing of the phenomenon. The street can be included as a layer for reading the transition because it reveals the changes in the city and not only its structure and fixed element. The streets in both Caniggia and Muratori's examples represent a specific city structure capable of bringing out permutations. However, in developing a possible tool to read the transition as a sum of permanence and permutations, the street can show not only the city structure but also the relation between the fixed part of the transformation and the changing one. Nevertheless, the street is just a part of the complexity of the city that needs to be defined for its purpose: to reconstruct the spatial structure and define the limits of change in the urban pattern. Different interpretations of the street representation can lead to overcoming the concept of structure as a fixed element in time and embracing the possibility of identifying the change and generating permutation with the project.

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Street colours for orderly settlement image

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Abstract

The colours of the street facades have a profound impact on the perception of a built environment and are an important determinant of its identity. Therefore the well-developed planning systems thoughtfully direct the selection of the colours. This paper presents the case study of the municipality of Moravske Toplice in north-eastern Slovenia, which is part of a rather distinctive cultural milieu where the tradition of the detailed urban design regulation is weak, and the colour-dimension of space has not been properly managed. As a result, the colour-defined image of the streetscapes deteriorates and fades away from the local traditions nowadays within the consumeristic society. The paper shows that the traditionally present colours of the facades in the area are rarely used in contemporary constructions or renovations as there are many options to choose from on the market while the spatial regulation stays rather weak and undemanding towards the investors regarding respect to the traditional colours. The methodological approach is presented to show how it is possible to address this issue in such circumstances. The need for expertise-based and proactive policy making is pointed out as a pre-requisite to achieve a balanced colour image of the streetscapes.

Keywords

colours, streetscape, visual dimension, regulation, urban design

Introduction and aims of the study

The façade colour has an important influence on the aesthetic response of the observer using the street space – buildings that feature harmonious colours are considered to be more congruous. At the same

¹ Minah, Galen. Colour as Idea: The Conceptual Basis for Using Colour in Architecture and Urban Design. Colour: Design & Creativity (2): 3,

time, the architectural and urban design practices seem to rarely make the colour a subject of serious inquiry within the design process.² However, the colours of the exteriors of the built environment have been addressed in various research works in the past decades rather comprehensively within the European context. Some of the more influential contributions come from the Nordic countries, where the dominance of the visual realm in the contemporary consumer, technological and informational society has been investigated. The research has shown that the appropriately arranged colours in space may contribute to feelings of the pleasantness of space, as well as they may have symbolic values and thus influence the built environment's identity. ³⁴⁵⁶

Many practical questions in relation to the colours in the built environment arise in contemporary urban design such as: are there specific colours that are perceived as adequate for certain kinds of buildings; are there differences in colour preferences between different user groups; and what kind and level of the rights shall the owners of the buildings be given when it comes to the colouring of their properties' exteriors?

These questions have a peculiar aspect within the post-socialist context of Slovenia, a Central European state, where a general democratisation process started in the 1990s and brought major changes into building practice. One of the consequences was a new interpretation of urban planning regulation⁷ which to some extent became less binding in the eyes of some citizens as they assumed to have gained more free-

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^{1-9, 2008.}

² O'Connor, Zena. Façade colour and aesthetic response: Examining patterns of response within the context of urban design and planning policy in Sydney. PhD thesis. Sydney: The University of Sydney, Faculty of Architecture, Design and Planning, 2008.

Rasmussen, Steen Eiler, Experiencing architecture (Vol. 2). MIT Press, 1964.

⁴ Pallasmaa, Juhani. The eyes of the skin: Architecture and the senses. John Wiley & Sons, 1996.

⁵ Janssens, Jan. Looking at buildings – Individual variations in the perception of building exteriors. Lund: LundsTekniska Högskola, 1984.

⁶ Janssens, Jan. Facade Colours-not just a Matter of Personal Taste. A Psychological Account of Preferences for Exterior Building Colours. NA, 14(2), 2013.

⁷ Hočevar, Marjan, et al. *Spatial and environmental values* 2004–2018. Ljubljana: FDV, 2018.

dom in choosing their own property's façade colour within the democratised system. An excellent example is the regulation of colours of the facades of residential properties. They would normally be regulated within local spatial plans by rather general descriptions such as "to be harmonious with local traditions" or "to be in line with local nature-based colour schemes", and have become interpreted in various, very "creative" ways. This means that many new and more intensive colours have appeared and resulted in the quickly changing image and appearance of Slovenian settlements, namely their streetscapes.

This has been recently recognised as one of the obstacles to preserving the local identity of Slovenian settlements by the spatial planning profession as well as authorities. Therefore, a new planning tool has been introduced along with the adoption of the new Spatial planning law⁸. It is called *Odlok o urejenosti naselij in krajine* – OUNK (Engl. Ordinance on the orderliness of settlements and landscapes) which allows local authorities to upgrade their local planning plans with additional regulation that focuses on the visual appearance and the perception of ordines of the built environments as well as open landscapes. Prior to introducing this new tool, practical studies have been implemented in order to understand the fast-changing colour schemes of the exteriors of the buildings better.

This paper illustrates the methodological approach of one of such studies on the case of the settlements in the municipality of Moravske Toplice. It served as a testbed and experimentation field to introduce the streetscape colour analyses and regulation as an approach to reaching a more harmonious colour scheme for the streetscapes of the settlement. The paper presents the methodological steps that were undertaken to collect the empirical data for understanding the state of the art and explains how the urban design guidance was prepared based on this research⁹.

⁸ ZureP-3 – Zakon o urejanju prostora Internet source accessed on 2nd of April 2021: https://e-uprava.gov.si/drzava-in-druzba/e-demokracija/predlogi-predpisov/predlog-predpisa.html?id=11662.

Nikšič, Matej & Gantar, Damjana & Goršič, Nina & Ivanič, Luka & Mujkić, Sabina & Praper, Sergeja & Fabčič, Viljem & Červek, Jernej. Odlok o urejenosti naselij in krajine – Priporočila <Ordinance on the orderliness of settlements and landscapes – Recommendations. Ljubljana: MOP

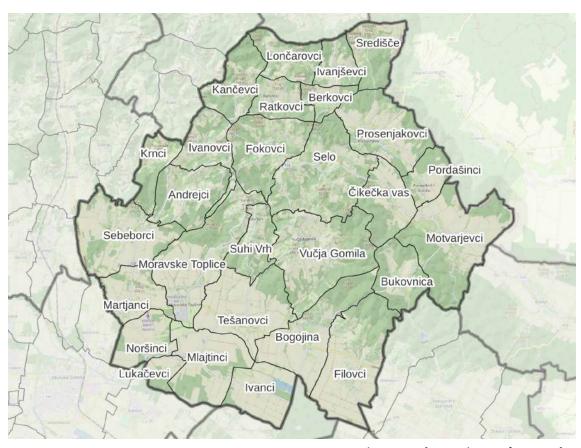


Fig.1 – The territory of Moravske Toplice municipality and its 28 settlements – Source: Basemap: Open-StreetMap; Digital elevation model: Ministry of environment, climate and energy, Slovenian environment agency; Municipalities and settlements: Surveying and mapping authority of the Republic of Slovenia; Author: Simon Koblar, UIRS)

Methodological framework

A combination of streetscapes has been applied in this study. The grounding method is case study research on the case of Moravske Toplice, a municipality in the North-Eastern part of Slovenia with less than 6,000 inhabitants in 28 settlements that are evenly distributed around the municipal territory (see Figo1). The municipality has a predominantly agricultural character. The only bigger settlement is Moravske Toplice which is the administrative centre of the municipality and has a tourist character due to the hot water springs that were the foundation for the development of the place into the thermal spacentre.

In order to understand the characteristics of traditional local architecture, a literature review was performed. The basic sources of information were two seminal works in the field of architectural place identity in Slovenia. The first one is the nationally well-known review of the traditional building types and their characteristics by Fister *et al* that classifies not only the typical architectural archetypes and their characteristics but also categorises the settlements according to their morphological structure and compositional characteristics. The other important source was the detailed review of the characteristics of the architectural design of the vernacular buildings in different parts of Slovenia by Juvanec¹¹ which analyses (in much more depth) the colouring, the detailing and the other characteristics of the detailed architectural design of the vernacular buildings.

However, besides the review of the above-mentioned seminal works and some other relevant documents (e.g. the regulation of the colours of the facades in the currently biding municipal spatial plan), the core of the research was based on the photo-analysis of the streetscapes which was done using the virtual photography-based representation accessible through the Google street View. The most important streets

<Ministry of the Environment and Spatial Planning>, 2022.

¹⁰ Fister, Peter, et al. Arhitekturne krajine in regije Slovenije: Arhitekturna identiteta <Architectural landscapes and regions of Slovenia: Architectural identity>. Ljubljana: MOP, 1993.

Juvanec, Borut. Arhitektura Slovenije: Vernakularna arhitektura: 2 Severovzhod. Ljubljana: Založba i2, 2010.

of all 28 settlements were analysed so that the perpendicular views from the middle of the street onto the main facades were analysed in terms of the colours that appear in such views. This means that not only the main surface of each façade was considered, but also the colour of the foundation wall if seen from the street, as well as the colour of the roof if seen from the street. In this way, the comprehensive colour scheme of the streetscape was detected for each settlement.

Besides the literature review and field analyses the third research method was used in order to detect the trends in the municipality – the municipal officials responsible for urban planning were consulted to reveal their notions on the current and foreseen situation in the field of the colouring of the facades, as seen through their years-long professional experiences and observations. The aim of this consultation was also to pre-test the possible scenarios for the future regulation of the colouring of the facades in order to maintain or re-gain the distinctive place identity through the colours of the facades.

Results

Traditional architecture

The literature review showed that there are many locally distinctive characteristics of architectural design. The most historical typology is the so-called "cimprača" (see Figo2), a wooden house with one floor and a steeply pitched roof. The lower part of the house was often plastered and painted with a white lime colour, while the upper part of the street-overlooking façade was wooden. Some of the houses were originally coloured lightly blue as some owners were adding copper sulphate into the lime colour which was believed to keep the flies away. This tradition was especially present in the northern, hilly part of the municipality which is nowadays part of the protected landscape park Goričko. Another characteristic of the vernacular architecture was that often the construction material was clay with hay, which was then painted with wait natural colour. The courtyard side was not necessarily painted, so the façade colours were darker and ranged from reddish to brownish in the courtyards. Some later building typologies and their facades were mimicking the bourgeois stylistic elements from the bigger cities of the Austro-Hungarian empire, in these typologies more

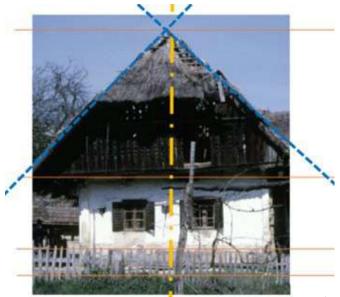


Fig.2 – An example of cimprača and its street façade – Source: Juvanec, 2010)



Fig.3 – Some examples of the traditional architecture in the municipality of Moravske Toplice and their typical façade-colours – Source: Juvanec 2010)



Fig.4 – Two examples of the traditional architecture mimicking the bourgeois stylistic elements)

decorative elements appeared on the facades and some other colours were rather typical, e.g. yellowish and beige (see Figo4).

The regulation in the municipal spatial development plan

The analyses of the municipal spatial development plan's guidance related to the designing of the facades revealed that there are some general guidelines. They mainly related to the colours of the facades, colours of the windows and doors, facade materials, general composition of the facade, artistic features, attitudes towards the heritage and the accessories and detailing on the facades. However, this regulation stays rather superficial and is not specific – it does not define the specific elements, colours or materials. Some examples of the regulations are as follows:

"Bright, pastel colours of facades are allowed";

"Facades should be painted with non-standout colours";

"The use of signal, screaming and fluorescent colours that are extremely disturbing in the space, stand out and are non-indigenous (e.g. lemon yellow, bright red, purple, vivid or meadow green, vivid or turquoise blue) is not permitted";

"The colour of the facades should be consistent with the colour of the windows and doors";

"Facades with wooden cladding, stone cladding, which is in a smaller proportion, and indigenous are allowed";

"Drawing ornaments and diagonals on facades is not allowed";

"The window openings on the front façade are upright, arranged symmetrically";

"The foundation walls should be darker brown, sandy or grey";

"The colour of the facade and its accessories must be defined in the project for obtaining a building permit and must be in accordance with the conditions and consent of Heritage Protection Authority";

"Log-cabin outlook of the facade is forbidden";

"Installation of large billboards on facades is not allowed".

The analyses of the state of the art

The state-of-the-art analyses revealed that there are many more colours present in the streetscapes of the settlements of Moravske Toplice municipality than the local spatial development plan allows. Fig.05 shows an example of the colour scheme of the main street of the

settlement of Tešanovci, where besides the traditional colours (see above) many other colours appear on the facades. Alike analyses were done for all 28 settlements. While the differentiation of the (lighter) colour of the main facade and the (darker) colour of the lower part of the facade is respected, the wide range of colour variations is an obvious deviation from the rules set up in the local spatial development plan. Fig.06 shows the wide arrangement of the colours (and their shares) for each of the analysed settlements, while Figo7 shows a selection of the graphical and compositional varieties too that range from diagonal and stripe patterns that are completely foreign to the local typology.

The interview with the local authorities

When confronted with the results of the state-of-the-art analyses, the experts from the municipal's department of spatial planning expressed their surprise about the level of the varieties of colours and their graphical variations (stripes, diagonals etc) that appear on the facades in their municipality. On the other hand, they approved they are aware of the problem and want to address it in order to achieve a more balanced, locally distinctive and tradition-embedded visual appearance of the facades throughout the municipality. Therefore, they agreed to consider a few scenarios on how the colours of the facades could be regulated in the future:

- Scenario 1: According to building typologies or the purpose and role of the building in the settlement;
- Scenario 2: According to the position of the settlements in the municipal and wider territory (e.g. flat/hilly position) so that a sequential experience in moving through the space is achieved;
- Scenario 3: According to the level of preservation of traditional architecture (e.g. limited set of colours in the traditional/historical core settlements, while wider set in other parts of settlements);
 - etc. hybrid scenarios of the above mentioned.

The municipality also agreed that the final proposed scenario shall include a level of participation of the owners of the buildings – or in other words that each owner shall be given more than one choice when renovating or defining the colour of a facade of a newly constructed building.

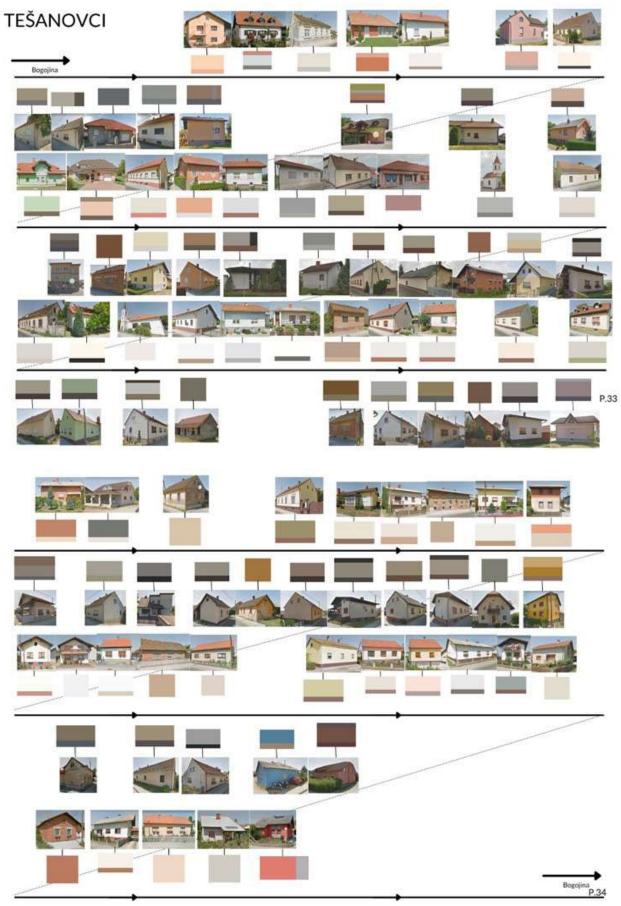


Fig.5 – The analyses of the colour scheme of the streetscape of the main street of the settlement of Tešanovci – Source: own analyses)

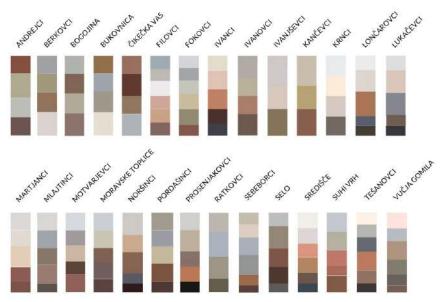


Fig.6 – The prevailing colours and their shares in the streetscapes of the main streets of the 28 settlements of the Muniyiplaity of Moravske Toplice – Source: own analyses)



Fig.7 – The presentation of the colours, graphical and compositional varieties that appear on the facades of the buildings along the main streets of the settlements in Moravske Toplice municipality and are contradicting the local traditions – Source: own analyses)

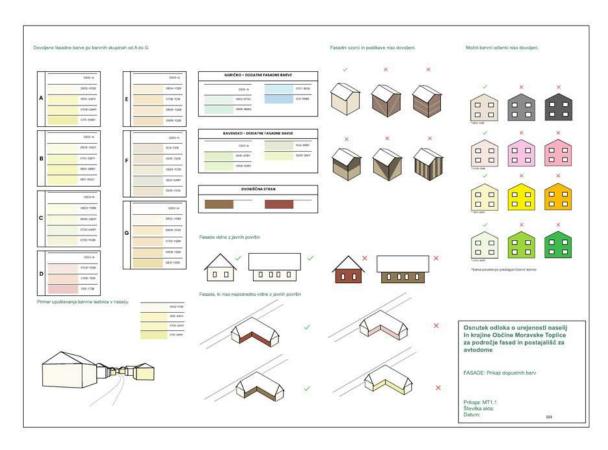


Fig.8 – The graphical appendix of the façade-colour guidelines for Moravske Toplice municipality –graphical design by N. Utroša)

In the process of a dialogue between the expert groups and the administrative bodies of the municipality, a new regulation was proposed. It is based on the limited selection of the façade colours that are defined by the NCS-code system which refers to the Natural Colour System, a colour scale based on the perception of natural colours (see Figo8). With the NCS system, it was possible to accurately describe and classify a variety of colour shades. To give the residents a clear idea of which colours are allowed, the guidelines (besides the exact codes in a written form) also presented the colours in a graphical manner (see Fig.08). An additional rule was developed that prevented the whole collection of the possible colours to appear along one street: the whole arrange of colours was divided into few sub-groups and an owner can only select a colour from the same group as the immediate neighbour has previously chosen. In the Goričko part of the municipality, additional blue tones are allowed as a reference to the traditional facades based on copper sulphate additives. The local tradition of the darker backyard facades was also integrated into the guidelines and some additional darker colours for the courtyards were offered as an option for the owners to choose. The graphical illustrations of the guidelines also clearly show what is not allowed - e.g., the more intensive varieties of the NCS-coded colours from the list are not allowed.

Discussion and conclusion

The local administration of the municipality of Moravske Toplice was one of the rare municipal administrations in Slovenia so far that has proactively started the process of rethinking the existing regulation of the facades colours due to the more and more chaotic appearance of street scapes of the settlements, where various none-traditional colours and graphical compositions started to appear. The state-of-the-art review showed that the existing approaches of building owners largely diverse from both the regulation in the local spatial development plan as well as from the traditional practice of façade design and colouring. This brings us to at least two major conclusions. Firstly, the regulation in the existing plan is far too vague to achieve a comprehensively thought out and coordinated colour image of the streetscapes. The general descriptions that demand the owners to colour their properties' facades in accordance "with the local traditions" are not detailed

enough. Secondly, even if there is a basic regulation given in the existing plans, it is not taken into account by the investors and/or owners of the buildings, and more over the violations are not sanctioned by any kind of the authorities.

These conclusions reaffirm the starting remarks that the general democratisation processes that started in the 1990s in Slovenia have brought major changes into building practice too, in which the interpretation of urban planning regulation is broadly and "creatively" interpreted in the eyes of some citizens. The regulation of colours of facades is an ideal example – even if they would normally be regulated within local spatial plans (however by rather general descriptions), they have recently become considered or interpreted in rather loose ways. This means that many new and more intensive colours as well as graphical compositions have appeared, which resulted in the quickly changing image and appearance of the settlements, namely their street scapes.

The mismatch between the regulation and the state of the art in the case of the settlements in the municipality of Moravske Toplice shows that a new approach is needed and demands proactive local administration. At the same time, this administration needs to understand the desire of people to express themselves through the choice of the colours of their properties' facades – which means that the improved regulation must include a certain level of choice for the residents while still limiting this choice to the certain limits that will in a longer-term form a more coherent colour-image of the streets-capes. Additionally, this study shows the importance of the professional expertise that is needed to backbone the administration in its decision-making, firstly, in the understanding of the historical characteristics and heritage assets, secondly, the current state of the art and, thirdly, the possible solutions that can improve the situation in the future.

Limitations to the study

This study was constrained to the short project deadlines and did not allow to include the residents and their perceptions in the study. In the future, they shall be included in order to understand the mind-

set of residents better and reveal the decision-making processes that make people choose locally non-traditional colours of the facades.

Acknowledgements

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Walks through the painted street. Some examples of translations between painting and architecture

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Abstract

Paintings, as places in themselves, allow us to discover and explore other worlds created by their authors. Using paintings of streets and public spaces, this article explores the ways in which these spaces have been represented beyond mere comparison with reality.

Using some examples from the end of the 19th century to the end of the 20th century, this work focus on paintings of the city of Barcelona with different pictorial styles that show a collection of approaches in the way of painting the street. Paying attention to how the artist handles urban and architectural elements, the point of view and other resources, we discover other streets, those painted. Multiple streets, streets cut out between buildings, streets that are the scene of ordinary events that we observe with different eyes. From an architectural point of view, aspects and techniques of the pictorial sphere are thus highlighted, opening our gaze to a new way of understanding space. In this way, paintings seem to become a source of design tools, vehicles for discovering new meanings and new relationships through a constant journey of analogies, dichotomies and translations between painting and reality. "Reviewing painting as a transversal theme makes it possible to look at things that we had not observed before". (Monteys Roig 2018)¹

¹ Monteys Roig, X., 2018. La calle y la casa: urbanismo de interiores. Gustavo Gili, Barcelona.

Through the paintings and their own logics, the aim is to capture from another point of view the architectural conditions that construct the street, to bring us closer to understanding it in another way. This other view of the city provides us with project materials to be transferred between painting and architecture.

Keywords

Painting, architecture, street, perception, art

The Painting can be a way to explain a reality of the city, allowing us to discover and explore other architectural aspects that we may not have paid attention before. Using images of streets and public spaces, this article explores multiple streets, streets cut out between buildings, scenes of ordinary and extraordinary eve When we raise our viewpoint, higher than the one from the ground level, we see another city, one characterized by a series of elements that cut out the sky: elevated planes, and an urban landscape made up of cornices, eaves, roofs, chimneys, sheds, television aerials, lift shafts, roofs and party walls. The latter, blind façades of built work, are characteristic of Barcelona's urban landscape.

The painter Oscar Tusquets (Barcelona, 1941) offers us in the painting "Medianeras de gracia" (Fig.01) a view of these parts of the city. There he shows us the district of Gràcia seen from above the height of the treetops and from its limits. The view shows up to four dividing walls, apparently aligned. The foreshortened viewpoint chosen by the painter explains the internal structure of the city and its depth. The buildings convey to us the structured order of the building sites, of full and empty spaces. In the void, one can imagine a street in the sky, with bare façades marking an impracticable alignment, a reflection of the interior layout of blocks. The roof between them appears as a third façade, like the party walls themselves.

In another example, the painter Pedro Moreno Meyerhoff (Barcelona, 1954) shows an elevated view of the urban boundary between the old quarter and the urban sprawl (Fig. 02). The painting, of square proportions, is structured in such a way that the upper level of the buildings occupies approximately one third of the canvas, while the remaining

two thirds are occupied by the sky. The foreground shows the superimposition of two chamfers of the "Eixample", the space between the buildings disappears, creating a flat image, almost like an unfolded elevation of the corner. If we were able to finish the painting down to the ground, the chamfered space would disappear and become a street. nts, beyond what we can appreciate through other media.

The urban landscapes, shown through the paintings, intertwine a series of relationships that give meaning to the places; scenes of passers-by, elevated perspectives, events, party walls, large avenues, colour, textures, façades, or promenades, among many others.

Through the paintings and their own logics, this article aims to capture the architectural conditions that construct them, beyond those related to the visual field, perspective or other fundamental questions related to the field of representation or graphic expression. From an architectural point of view, the pictorial field is used as a platform for the speculation of ideas to understand space in a different way. In this way, paintings become a source of projective tools, vehicles for discovering new meanings and new relationships through a constant journey of analogies, dichotomies and translations between painting and reality.

This work focus on some examples, representations of the city of Barcelona between the 19th century and the end of the 20th century.

An important reference for this research is the one made by Xavier Monteys in his book "Urbanismo de interiors" (Monteys Roig 2018)². In the chapter "La pintura: La calle y la lluvia", he makes some insights and proposals to approach the topic of the street through paintings. In other parts of the book, the author also addresses the issue that paintings are a way to communicate ideas about the street: empty streets, streets that can be seen from windows such as Pablo Picasso's Barcelona, objective streets such as those in Edward Hopper's New York paintings, and also detailed streets such as Antonio López's Gran Vía in Madrid.

In another context, we find the preface written by Delfín Rodríguez for the catalogue of the exhibition "Arquitecturas Pintadas" (Rodríguez

² Monteys Roig, X., 2018. La calle y la casa: urbanismo de interiores. Gustavo Gili, Barcelona.

et al. 2011)³. The exhibition held by the Thyssen Museum in Madrid in 2012 brought together a series of collections of paintings depicting the city from the 14th to the 18th century. There we could observe a disorderly reflection of the concept of the city and shows us, in parallel to the built architecture, "another lighter one erected on the canvas". It depicts cities inspired by buildings that once existed, others in ruins, ideal cities or architectural whims. In this sense, the exhibition is a demonstration of the power of painting as a field of inventive design.

We start with a series of case studies, paintings of the city of Barcelona, organized by themes representing elements or points of view of the city and its relationship with the streets. This work is based on the comparison and contrast between them, in order to construct ideas of interpretation of the street and its elements.

The party walls

When we raise our viewpoint, higher than the one from the ground level, we see another city, one characterized by a series of elements that cut out the sky: elevated planes, and an urban landscape made up of cornices, eaves, roofs, chimneys, sheds, television aerials, lift shafts, roofs and party walls. The latter, blind façades of built work, are characteristic of Barcelona's urban landscape.

The painter Oscar Tusquets (Barcelona, 1941) offers us in the painting "Medianeras de gracia" (Fig.01) a view of these parts of the city. There he shows us the district of Gràcia seen from above the height of the treetops and from its limits. The view shows up to four dividing walls, apparently aligned. The foreshortened viewpoint chosen by the painter explains the internal structure of the city and its depth. The buildings convey to us the structured order of the building sites, of full and empty spaces. In the void, one can imagine a street in the sky, with bare façades marking an impracticable alignment, a reflection of the interior layout of blocks. The roof between them appears as a third façade, like the party walls themselves.

Rodríguez, D., Borobia Guerrero, M. del M., Dal Co, F., Museo Thyssen-Bornemisza, Fundación Caja de Madrid (Eds.), 2011.

Arquitecturas pintadas: del Renacimiento al siglo XVIII. Museo Thyssen-Bornemisza: Fundación Caja Madrid, Madrid.



Fig.1 – "Medianeras de Gracia" Oil on canvas, 50 x 61 cm – Source– Private Collection, Oscar Tusquets, 1978



Fig.2 – "Título desconocido" – Source: Private Collection Pedro Moreno Meyerhoff, Unknown date

In another example, the painter Pedro Moreno Meyerhoff (Barcelona, 1954) shows an elevated view of the urban boundary between the old quarter and the urban sprawl (Fig. 02). The painting, of square proportions, is structured in such a way that the upper level of the buildings occupies approximately one third of the canvas, while the remaining two thirds are occupied by the sky. The foreground shows the superimposition of two chamfers of the "Eixample", the space between the buildings disappears, creating a flat image, almost like an unfolded elevation of the corner. If we were able to finish the painting down to the ground, the chamfered space would disappear and become a street.

The presence of party walls in the Barcelona Eixample is constant. The position of the party walls allows us to discover the order of the streets and their buildings⁴, a reflection of the urban configuration (Fig.03). However, the painting is also capable of completely changing the point of view, using the party wall to imagine another construction of the city, that of the street between superimposed planes and the variable depth of the façades.

Overlaps

"Perspective is the art of translating a three-dimensional image into a two-dimensional plane by means of geometrical, descriptive and mathematical rules. The knowledge of perspective can be very difficult, but the basis rests on a simple fact: you cannot turn the corner with your eyes. While this fact is unfortunate on the one hand, on the other, it allows us to place in the hands of the spectator the task of imagining and guessing what is behind it". (Gombrich e Ferrater 2002)⁵

Based on Gombrich's words, we could say that, in addition to generating depth in paintings, perspective allows us to construct the image through the overlapping of elements. To explain this idea, let us focus,

⁴ Note: The party walls also allow us to discover the internal structure of the building itself since, on many occasions, the structure of the building is taken to the limits, showing us the internal order and becoming a reflection of the internal structural functioning, as in the case of Meyerhoff's party walls.

⁵ Gombrich, E.H.J., Ferrater, G., 2002. Arte e ilusión estudio sobre la psicología de la representación pictórica. Debate, Madrid (España).



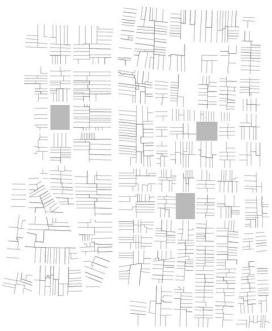


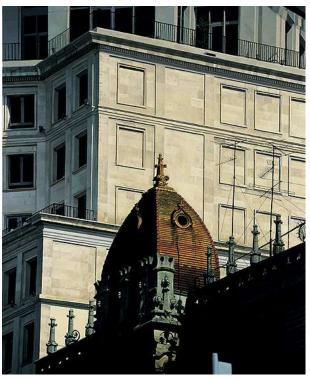
Fig.3 – Plot of land in the Gracia neighborhood and abstraction of party walls - Source- Author 2022





Fig.4 – "Carrer de Tapineria" Óleo sobre cartón, 55 x 48 cm – Source- Private Collection, Xavier Serra de Rivera 1992

Fig.5 – Foto "Carrer de Tapineria" – Source: Author 2022



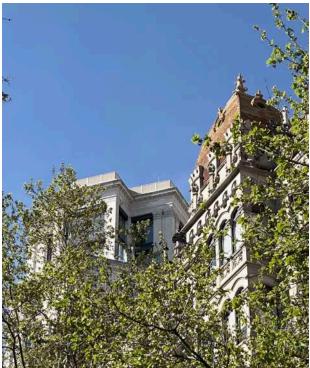


Fig.6 – "Celestes II" Óleo sobre cartón, 116 x 81 cm – Source: Private Collection, Gonzalo Goytisolo 1997

Fig.7 – Foto Casa Rocamora - Source: Author 2022

for example, on the following cases: Carrer Tapineria (Fig.04) by the artist Xavier Serra de Rivera (Sant Joan Despí 1946) and Celestes II (Fig. 06) by Gonzalo Goytisolo (Barcelona 1966).

Carrer de Tapineria is a street that runs parallel to Via Layetana and joins Plaça de l'Àngel and Plaça de Ramón Berenguer until it reaches Av. de la Catedral. The point of view is practically parallel to the building on the left, with the old city wall of Barcelona at the center of the composition. If we make a comparison with reality (Fig.05), we can see that one of the towers of the wall is outside the point of view, as it is one of the towers of the cathedral. It is the artist who has modified its position to fit it into the pictorial composition. Furthermore, the modification of the proportions of the site transforms the street and the city of reference. The building on the left of the image has all the windows on the façades erased, leaving a continuous plane that affects the urban proportionality of the whole: the building suddenly appears larger than it is, as it had no singularities on the façade. The viewpoint is higher than normal and therefore also changes the proportion of the architectural ensemble.

In the painting Celestes II by Gonzalo Goytisolo (Fig.06), he portrays in the foreground the crown of the Casa Rocamora building (Fig.07), the work of the architects Joaquim and Bonaventura Basagoda i Amigó (1914–1917). In this case, the absence of sky in painting takes us to a built-up world, a collage, capable of being aggregated, an infinite view of the city. The disappeared street can reappear in our ability to make a project with the painting. With it we can imagine the railings on the edge of the cornices as the limit of elevated streets interconnected by the building (Fig.08). This idea of streets in the air could be linked to those shown in "Metropolis of Tomorrow" of Hugh Ferris. Both, constructions of an architectural desire, the project of a speculative gaze.

The street from the window

Pictorial representations of urban scenes are still partial, cut-out or framed views of the city that show us a part of the urban landscape and allow for transversal readings. The architectural view of street-level

⁶ Ferriss, Hugh. *The Metropolis of Tomorrow.* 1st ed. Nueva York: Ives Washburn, 1929.

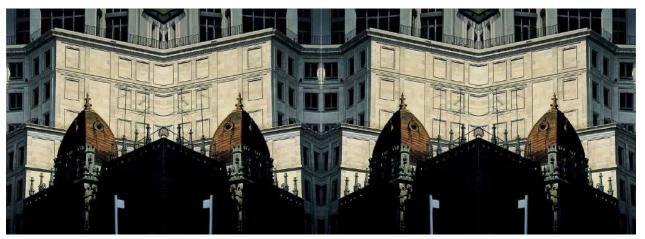


Fig.8 – Collage La calle infinita – Source: Author 2022

paintings is usually limited by the size of the canvas or the framing that the painter wishes to achieve. At a higher level, as for example from inside the house, the window becomes a good pictorial-architectural frame towards the street. The window places us at a privileged height from the street, at a sufficiently distant height to be both observers and participants in the events taking place in the street.

Along these lines, the approaches to painting and architecture made by Víctor I. Stoichita (Bucharest 1943) in his book "The Invention of the Painting. Art, craftsmen and artifice in the origins of European painting". Starting with an analysis of the paintings in niches executed during the Renaissance period, Victor (Stoichita 2000) questions the relationship between the framing of the niche or niche ending in a semicircle and that of the painting in which, according to him, there is a "structural link".

Let analyze the painting by Josep Roca-Sastre (Terrasa, 1928 - Barcelona, 1997). El sostre de la Pedrera (Fig.09). In this case it shows an interior view of the Casa Milà. Half of the painting is occupied by the recognizable false ceiling of the room, backlit, the other half by three large windows that open onto the street. The plane of the ceiling is not correctly aligned with the point of view towards the street. On the one hand, this causes the gaze to be focused outwards through the window. But on the other hand, if we want to look at the painted ceiling, it is necessary to shift our gaze to that part of the painting.

The impossible viewpoint of this painting shows us the ceiling of the Casa Milà as if we were walking along Passeig de Gràcia, in the same way as if we were to raise our eyes and see the magnificent undulations as a reflection of those of Gaudí's paving that we step on as we walk (Fig.10).

In another pictorial example, and in a similar analogy, the painting by Josep Serra Llimona (Ametlla del Vallès 1937 – 2020) Balcó i Cortina (Fig.11), shows us a perspective of the interior of a flat in Barcelona's old quarter in which we can glimpse a glimpse of the exterior. In this case, the view of the outside is blurred by a curtain of thread, by the half-

⁷ Stoichita, V.I., 2000. La Invención del cuadro: arte, artífices y artificios en los orígenes de la pintura europea. Serbal, Barcelona.



Fig.9 – "El sostre de la Pedrera" Oil on cardboard, 162 x 114 cm – Source: MACBA Collection, Josep Roca-Sastre 1969

Fig.10 –Pedrera-Passeig de Gràcia section – Source: Author 2022



Fig.11 – "Balcó i Cortina" Oil on cardboard, 92 x 73 cm – Source: Sala Parés Collection, Josep Serra Llimona 1963 Fig.12 – Fragmentation of composition elements – Source: Author 2022

open window itself and by the bars of the railing that hide behind them the passers-by wandering in the street. In the case of this painting, the point of view is slightly lower, which allows the attention to be drawn to the central escape of the street and all the attention to be focused on the end of it.

In this case, the plane of the street overlaps with the plane of the floor, which creates a spatial continuity between inside and outside: the street enters the house as if the height of the floor were actually on the ground floor (Fig.12). The façades of the buildings on the outside are folded to match the position of the window frames, which become the interior façades of this street that reaches out to us. In Roca-Sastre's painting, the street enters the house through the roof, while in Serra Llimona's painting, the street enters the house through the floor plan.

The street detail

Often, the detail tells us a different story from the painting itself. (Arasse 2008)⁸ Beyond understanding them as a mere fragment of a larger whole, they become landscapes in themselves, other spaces, other places.

Josep Cisquella (Barcelona 1955–2010) pays great attention to the details of the street in his paintings, as for example in his canvases of "Passeig de Gràcia I and II" (Fig.13 and 14) to cite a few examples. In his monograph (Cisquella 2006)⁹ He tells us that once, in his New York gallery, he wanted to hang a sign saying: "Please touch". In that sense, perhaps his paintings are an attempt to approach not only touch, but also to construct a space for that which is painted.

One of the most interesting aspects of Cisquella's paintings is the appropriation of the shadow of everyday objects in the city. In many of his paintings it is the shadow that explains the changes in level or in the horizontal and vertical planes of the city. If the shadow did not exist, we would probably not be able to perceive the directionality and

⁸ Arasse, Daniel. 2008. El Detalle : para una historia cercana de la pintura. Book. Lecturas (Abada). Historia del arte y de la arquitectura. Madrid: Abada.

⁹ Cisquella, Josep. 2006. Josep Cisquella: touching reality. 1st ed. San Francisco, CA: Caldwell Snyder Pub.





Fig.13 – "Passeig de Gràcia I", Oil on cardboard, 140 x 72 cm – Source: Private Collection, Josep Cisquella 1998

Fig.14 - "Passeig de Gràcia II", Oil on cardboard, 182 x 137 cm - Source: Private Collection, Josep Cisquella 1998

sense of the changes in the planes represented. The shadows mimic the surfaces, giving representativeness to the topographical levels that we are not able to see. Another interesting factor in Cisquella's paintings is that in painting "in detail" the scale and proportion of the whole is lost. In his paintings, normally, there are no building or figure figures that could give scale to the whole, but they are places in themselves, whose scale of detail disappears and allows a more abstract interpretation, being imagined as landscapes or abstract topographies.

The panoramic street

The view of Barcelona from Montjuïc shows us a compressed city. From the MNAC (Museu Nacional d'Art de Catalunya) we can see Avinguda de Maria Cristina, Gran Via, Carrer Tarragona and Plaça d'Espanya, the only clear structures of avenues and enclaves that can be seen from there. Beyond these, the city spreads out in a sea of buildings until it reaches the foot of the Collserola mountain. From this point, you can see not only the mountain of Montjuïc, but also the other hills that make up the topography of Barcelona, such as Turó de la Peira, El Putxet and El Carmel. In contrast, from the other side of the city, Collserola, the view would be extended, with the city opened up to the horizon. In this painting by Josep Segú (Salomó 1958) (Fig.15), the city is portrayed right up to the foot of Collserola, which makes the city loom much more closely over itself, shortening the distance, and as there is practically no sky, the city is even more compressed and hovers even more over the viewer. The perception of the city in this painting is that of a superimposition of buildings that apparently follow no urban structure, where the city dies quickly at the foot of the mountain. The statue becomes a colossus that can be measured on the same scale as the buildings. In contrast to this canvas, we find another work by Joan Martí (Sant Cugat del Vallés 1936-2003) (Fig.16) where the point of view is practically in the same place, but shifted and, unlike the previous painting, it is located on the axis of Avenida María Cristina to portray the city. In this case, the urban structure of the avenue is clearly depicted and framed by the fountain and the two Venetian towers. In this sense, and unlike the rest of the buildings on the skyline, which are blurred



Fig.15 – "Barcelona, Montjuich", Oil on canvas, 97 x 195 cm – Source: Private Collection, Josep Segú 1998–1999

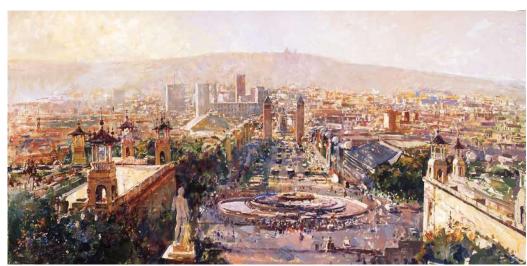


Fig.16 – "Montjuich", Oil on canvas, 111 x 205 cm – Source: Private Collection, Joan Martí 2002



Fig.17 – Planimetry of Barcelona Collserola - Montjuich. Original planimetry, "compressed" and "stretched" – Source: Author 2022

when the insight moves away, the painting also situates the rest of the city at a greater distance. The statue is a privileged observer, an inhabitant of the city and its perspective. If in Josep Segú's painting the city seems to be shortened, in this case the city seems to be stretched out more than usual, stretched out. In both cases the scale is completely deformed, a compressed city of similar objects versus a stretched city in which the perspective highlighted by the streets hierarchizes its protagonists. (Fig.17)

The hidden street

During various events that take place in the city, the streets or public spaces become backdrops, stages whose occupation transforms what is understood to be the street.

In Achille Battistuzzi's (Trieste X – Barcelona 1891) painting of the Pla de la Boqueria (Fig.18), the buildings open up to make room for the street and the intervening figures. In this case the Rambla seems to disappear to give way to a large public space that takes on the character of a square. The continuity of the paving, both longitudinally and transversally, generates a homogeneous layer that dilutes the directionality of the space, making the linear condition of the street disappear. The scales are deformed, as occurs in the bell tower of the Església del Pi, and the people occupy the ground floor while the windows are mute on the façades.

Another example of a painting that portrays an urban event is the painting by Ramón Casas (Barcelona 1866–1932) (Fig. 19). It depicts the moment when the procession leaves the church of Santa Maria del Mar, just a few moments after the explosion of a bomb, the event which gave rise to this painting¹⁰. The scene is framed from a high view and the crowds of people do not allow us to see how the facades and corners intersect with the plane. In this sense, the great multitude of human figures makes the horizontal plane disappear and, as the buildings do not cut out the sky, the limit of the space represented cannot be seen. All this leads to the possibility of interpreting

Nota: La explosión de una bomba a la salida de la procesión de Corpus de Santa Maria del Mar el 7 de junio de 1896 sugirió al pintor esta obra.

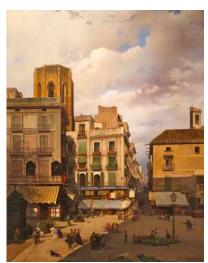




Fig.18 – "Pla de la Boqueria", Oil on canvas, 159 x 124 cm –Source: MNAC Collection, Achille Battistuzzi 1873

Fig.19 - "Procesión del Corpus de la Iglesia de Santa Maria", Oil on canvas, 115x 196 cm - Source: MNAC Collection, Ramon Casas 1896-1898 this place as a street turned into an interior in which the balconies are theater boxes from which to watch the event. In both Achille's painting and that of Ramón Casas, the street is transformed into another stage in which the linear spatial condition of the street is lost, becoming another place.

Conclusions

The case studies presented show a repertoire of points of view from which to approach the street; from its structure, at street level, by zooming in, from a high level, from partial views or from the interior. These indicate the variety of ways of approaching the street and observing it, attending to its presence, sometimes indirectly.

Observing the painting from a project design intention and architectural point of view allows us to construct new ideas of the street, public space or city. From a series of analogies and approximations, it is possible to manipulate and invent spaces using the elements and compositions of the paintings themselves.

In this work, various strategies for the practice of design have been used: the deformation of perspective, the use of collage, the questioning of scale, the superimposition of planes, the rethinking of limits or the construction of fictitious spaces. All of them have allowed us not only to discover other realities about the paintings, but also to extract methodological mechanisms for the conceptual construction of architecture.

Paintings seem to become a source of design tools, vehicles for discovering new meanings and new relationships through a constant journey of analogies, dichotomies and translations between painting and reality. This other view of the city provides us with project materials to be transferred between painting and architecture.

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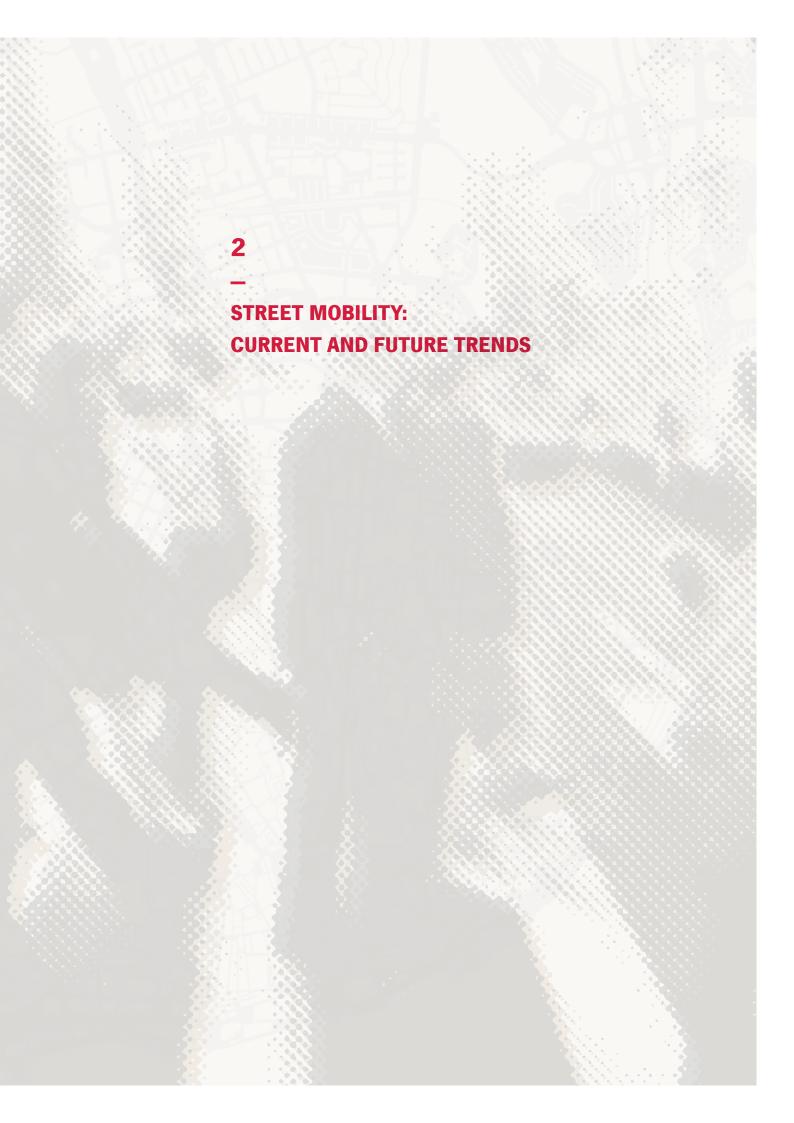
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The search for the identity of the Polish street the role of cross-section of streets as the fundamental factor in the perception of urban space

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Abstract

The street is the fundamental element of shaping the urban space. Among the most important factors forming the character of the city are the cross-section and appropriate functional diversity¹. In the second half of the 20th century, due to strong influences of mature modernism on urban planning, newly developed streets became spaces far removed from the urban archetype. Typically, mono-functional areas with residential buildings removed and often facing away from the street surrounded historical centres with frontages shaped over several centuries. Since the end of the 1980s, new streets have been emerging in Polish cities². While they were meant to refer to the traditional frontage form, these new projects often deviated from the established urban patterns of a given city.

The 21st century saw a rapid development of the housing market in Poland. The lack of spatial planning resulted in a rather chaotic development of urban space, and new streets were mainly built in line with property developers' guidelines³. One of the most important factors in shaping space is the access to sunlight, regulated by law. The cross-sections of newly constructed streets are often random. The main aim of Arkady, 1984, p. 157. this article is to analyse typical historical cross-sections of streets as well as current conditions in order to determine appropriate parameters for newly constructed streets in Polish cities.

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Keywords

Street cross-section, Polish urban design, access to sunlight

What should the street cross-section be?

The answer to this question is very complex and difficult to define in a scientific context. These difficulties, however, should not block the

search for an answer to such an important issue related to the functioning of the city. This article considers the aspect of the cross-section itself, as one of many other elements responsible for the aesthetic and functional quality of the public street space. This problem seems to be universal in many cities. The street as an archetypal element of the urban structure is perceived by users as a physical element of space in addition to other issues. The increasing absence of an archetypal street form is a major challenge for urban planners and architects in different parts of the world regardless of cultural backgrounds. To better illustrate the problem and to narrow it down accordingly, the case of the street in Polish cities was examined. The search for an answer concerning the form of a street should be carried out on two levels. The first is the historical plane related to the identity of Polish cities. The attractiveness of streets in the historical fabric of a city allows us to assume that they should become a model for creating new parameters of urban development. The concept of a historic street is defined in this case as a street shaped up to the first half of the 20th century. The development of mature modernism in post-war Poland favoured the creation of urban space without the participation of the traditional street form, contrary to the urban planning patterns according to which cities had usually developed since the Middle Ages. The analysis of cross-sections of historic streets of Polish cities may provide answers in terms of the aesthetics and character of urban space in Poland. This requires a certain generalisation, because depending on the size of cities and their zones street cross-sections differ considerably. However, there are characteristic street cross-sections that recur in many cities. They are the result of legal conditions and building traditions.

Another level is the functional layer. In this case, these are parameters related to the height of the development. It is limited by the access of sunlight to residential spaces. This is the main reason for the loss of the traditional character of a street in Polish cities due to legal conditions. However, the proper functionality of a street cannot be understood only in technical terms. The concept of atmosphere used by Eberhard Troger and Dietmar Eberle¹, which is related to the density of

Troger, Eberhard and Eberle, Dietmar., Density & Atmosphere: On Factors relating to Building Density in the European City. Berlin, Munchen, Boston: Birkhauser 2014.

urban development, is an important element in its proper functioning. In addition, a factor that has a significant impact on the functioning of a city is the scale of buildings adapted to the needs and capabilities of human perception. The distances between buildings and their heights significantly influence the character of a city.

Inhuman space as an impulse for new scientific research

Since the 1960s, the critique of modernist urban forms seems to be one of the most important threads of research in urbanism. Jane Jacobs' manifestos², Jan Gehl's successful design interventions³, and new currents among urban planners and architects are evidence of the disillusionment with mature modernism stemming from the Athens Charter. The first attempt to create a recipe for a city devoid of modernist errors was made by postmodernists looking for traditional spatial patterns, such as Christopher Alexander or Leon and Rob Krier. Their activities, commonly known as New Urbanism, were strongly criticised by the architectural community at the end of the 20th century. The ideals of a return to idyllic traditional architecture and urbanism in many cases proved most grotesque on the example of American theme parks⁴. From the perspective of the third decade of the 21st century, the contributions of "A Pattern Language" or "Choice of Fate" provide valuable insights, and a growing interest in classicising postmodernism is evident in the general consciousness of architects and critics.

In his book "Urban Design: Street and Square", Cliff Moughtin describes the street in a multi-faceted way, drawing on classics such as Vitruvius, Alberti and Sitte as well as urban issues of the late 20th century. The physical and aesthetic parameters of the street are also

² Jacobs, Jane. The Death and Life of Great American Cities . New York, Random House 1961.

³ Gehl, Jan and Svarre, Brigitte. How to Study Public Life. Washington: Island Press 2013.

⁴ Rykwert, Joseph. The Seduction of Place: The History and Future of the City. Oxford University Press 2004, p.151.

⁵ Alexander, Christopher and Ishikawa, Sara and Silverstein, Murray. *A Pattern Language*. Oxford University Press 1977.

⁶ Krier, Leon. *Architecture: Choice or Fate.* London, Papadakis Publisher 1998.

⁷ Moughtin, Cliff. *Urban Design: Street and Square.* Oxford: Architectural Press 2003.

addressed in this book. Another important comprehensive publication on the street is the book "Streets as public spaces and drivers of urban prosperity" produced for UN Habitat, which focuses on the functionality of the street.

In the comprehensive publication "Urban Grids. Handbook for Regular City Design" its authors note the universal tendency for cities to develop as regular grid-based developments. The physical characteristics of a grid are "...an instrument with the ability to design urban space without a defined program". A comparative analysis of the geometric structure of more than one hundred cities from different regions of the world also shows their typical street cross-sections, which are the most noticeable elements of urban space perceptible by humans. The grid as an urban form is a tool of the planner, but its visible derivative is the space of the street which has its concrete cross-section.

An extremely valuable work on urban space is "Density & Atmosphere: On Factors relating to Building Density in the European City"¹¹, which compares areas of varying intensity in Berlin, Vienna, Zurich and Munich. This book demonstrates the positive influence of high building intensity in shaping appropriate urban functioning. Already in the first sentences of the book the authors point out that "after the failures of the divided, dispersed city of the modern era and the formalist experiments of post-modernism, the new approach to solving the problems in many places is to return to the traditional European image of the city"¹¹².

The main objective of this paper is to estimate optimal geometrical parameters for a street cross-section in Polish cities. The determined parameters would confirm the thesis that the street cross-section of a designed urban space should take into account the functional and historical conditions that constitute the continuity of the urban image of a

⁸ Mboup, G., and R. Warah. United Nations Human Settlements Programme. Streets as Public Spaces and Drivers of Urban Prosperity. Nairobi: UN-Habitat 2013.

⁹ Busquets, Joan and Ynag, Dingliang adn Keller, Michael. Urban Grids. Handbook for Regular City Design. ORO Editions, 2019.

¹⁰ Ibidem, p. 11.

¹¹ Troger, Density... op. cit.

¹² Ibidem, p. 34.

traditional city¹³. The diversity of Polish cities and their specific morphologies may be an obstacle to such an unambiguous statement. The parameters developed in this paper relate to a new mixed-use morphology that would constitute a continuity of the city providing new residential spaces while maintaining the classic urban image. A morphology based on a well-defined street section would become an alternative to the chaotic spaces implemented by developers in the first decades of the 21st century. The design of these spaces lacked reflection on the relationship with the urban core, focusing primarily on the metres of residential space sold. The housing estates built are now alien islands, isolated from the city. One of the main reasons for this is forgetting the physical role of the street, which is "...the only public space that can ensure the continuum of the city".

The street as an architectonic space

The street is a fundamental element of the city, but the street is also a fundamental element of architectural space. Dom Hans van der Laan going back to the origins of human activity notes that "architecture is born of this original discrepancy between the two spaces – the horizontally oriented space of our experience and the vertically oriented space of nature; it begins when we add vertical walls to the horizontal surface of the earth" In this original context, street space best illustrates this definition. It is in the street space that we feel the physical presence of the city and its architecture. The frontage as a traditional element in the morphology of the city thus plays the primary role of a wall that provides the city user with a stay in architectural space, that is, a safe and tame space, separated from an undefined and unknown environment. The need for continuity of street frontages appears to be even more important in shaping local urban space.

The street space should in a way become an extension of the domestic space, where the level of privacy of the neighbourhood courtyard

Lynch, Kevin. *The Image of the City*. Cambridge, Mass: Technology Press & Harvard University Press, 1960, p. 106.

¹⁴ Troger, *Density...* op. cit., p. 200.

^{15 .}Van der Laan, Dom Hans Architectonic Space. Leiden: Brill, 1983, p. 5.

can be combined with the casual users of the city. In this way the street combines the functions of a city-wide public space with the local needs of its inhabitants. The phenomenon of the street as a primary public space was highlighted by Jacobs, for whom street pavements are an important educational element for children, where they learn to interact with the outside world within a safe and familiar neighbourhood community¹⁶. The architectural form enclosed by frontages of urban buildings of proportions that can be grasped by human perception allows for easier identification with this space.

The massive construction of prefabricated housing estates inspired by CIAM ideas has reduced the street form outside historical cities to a communication space surrounded by greenery. The loss of the physical character of the street has become a permanent feature in the landscape of Polish cities, making daily life more difficult for the inhabitants, who are condemned to difficult access to basic services and to a well-functioning public space on a local scale. The socially perceptible mistakes of urban planners began to be strongly criticised in Poland in the 1980s, which influenced the realisation of new residential spaces taking into account the traditional language of the city. The most successful was the reconstruction of the centre of Elblag, which had been waiting for more than 30 years after being destroyed in the war. New residential buildings with services on the ground floor were realised on the historical street grid. Similar projects were started all over Poland, but the political changes after 1989 and the chaos they caused led in many cases to the abandonment of urban planning by city authorities. In the 1990s, when standards and guidelines for the design of new streets were created in many cities around the world, no studies of this type were published in Polish cities, which greatly contributed to the creation of chaotic space. New housing estates built by developers were often constructed on enclosed, fenced-off areas. With the exception of a few model developments, which were developed in consultation with the city authorities, the streets of Polish cities became a random space designed mainly for cars.

Traditional street in a Polish city

Most Polish towns and cities have a medieval origin. Their urban

16 Jacobs, The Death... op. cit., pp. 82-85.

layout, resulting from the German foundation laws, was strictly defined. With the development of the bourgeoisie, especially during the Renaissance, the streets began to take the form that in some places can be seen in modern times. Their attractiveness is not only due to historical architectural forms, but also to the character of the urban form and the proportions of the streets. The estimation of geometrical parameters of street cross–sections from different periods can be measured by the size of the central angle, which was used by Kazimierz Wejchert. It is the angle between the point of the floor and the gable of the highest wall of the adjacent building¹⁷. Analysing the central angles of old town streets in Polish cities it can be seen that they usually range between 65 and 75 degrees.

Streets in towns with several centuries of tradition but lacking subsequent development in the 19th and 20th centuries are characterised by single-storey buildings, which can be found in many small towns in Poland. The central angle is usually about 40 degrees. With a street width of 7 to 9 metres, low-rise buildings allow the passer-by to have the perception of being in a safe and concrete urban interior. With such a cross-section, a person is able to take in whole walls of buildings with his or her eyes.

In the nineteenth-century city the variation of street cross-sections depended on the development of specific fragments was characterised by contrasts even within a single street. At the beginning of the nineteenth century the classicist buildings formed tracts with a cross-section of 40 to 50 degrees, but the rapid increase in the population of the cities caused an unprecedented building movement, which made the street cross-sections characterised by a central angle to the streets of the old city. The fundamental difference here, however, was twice the scale.

Analysing cross-sections of traditional streets in Polish cities, one can get the impression that they are very diverse. Their central angle ranges from 40 to 75 degrees, which in the case of further considerations should be the limiting parameters when determining the form of newly designed streets. This variation mainly concerns historical periods and the resulting functional conditions. Despite the impression of

17 Wejchert, Elementy... op. cit., p. 157.

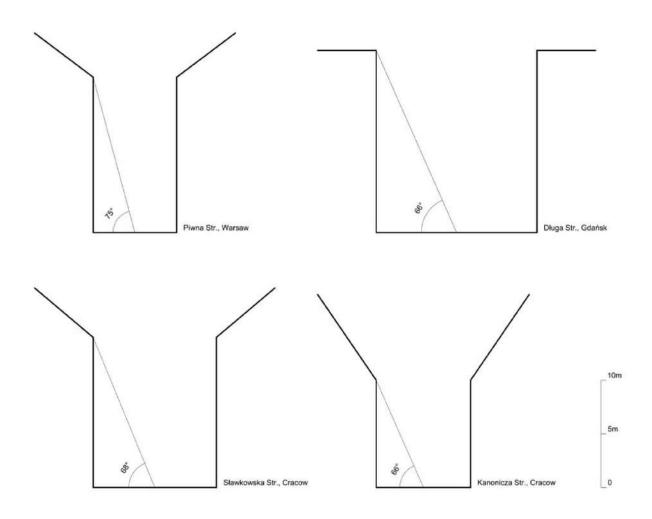


Fig.1 - Cross-sections of medieval streets in Poland - Source: Author 2022

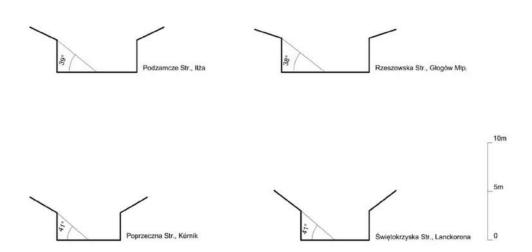
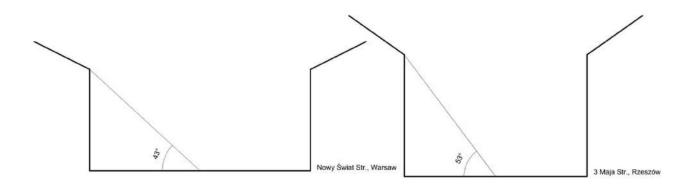


Fig.2 - Cross-sections of traditional streets in Polish small towns - Source: Author 2022



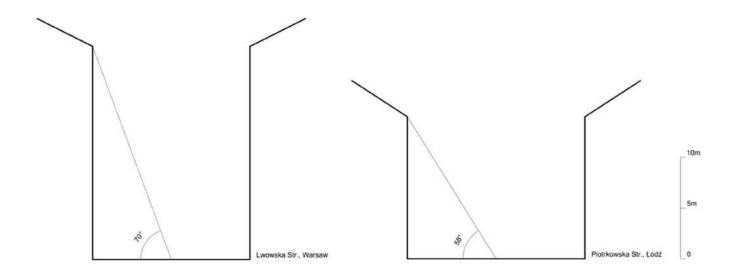


Fig.3 - Cross-sections of of nineteenth-century streets - Source: Author 2022

diversity in the cross-sections of Polish streets, certain characteristic tendencies and even patterns can be found, which in specific periods were copied in many cities. Proven solutions for the formation of street space were used in different cities, often hundreds of kilometres apart, which can be seen in urban spaces of medieval origin, as well as in later modernisations of the classical period. A good example of the phenomenon of spatial homogeneity within Polish cities is the parceling of streets with characteristic modernist tenement buildings of the 1930s. Similar spatial phenomena, not necessarily positive and often accidental, can be observed in various corners of Poland also in the 21st century. This tendency to replicate solutions in different cities should therefore be used to shape cities according to specific guidelines which would enable cities to develop in a more sustainable way.

Parameters of the proposed section

When creating a new street form in a Polish city, it is necessary to achieve at the same time the greatest possible central angle, the greatest possible intensity, to maintain a scale of development adapted to comfortable human perception and to reconcile these elements with the functional considerations of illuminating the dwellings with sunlight and providing basic elements for road users.

The minimum street width in which the basic elements for its proper functioning in the city are included is 20m. This lane accommodates two 2.5m wide pavements, two 1m wide cycle lanes, a 0.5m wide safety strip, space for greenery and 3m doubled parking spaces and a 7m wide lane for cars. Where a dedicated urban transport lane is provided, the street width should increase to 25m. The scale of development of new streets should combine opposing assumptions. High density is contrasted with access to natural sunlight. The street space should retain a human scale, allowing adequate perception of the surroundings and the formation of human interactions. At the same time, the development of the street should have a high enough intensity to make optimal use of the urban area and to maintain an urban atmosphere. The combination of these two parameters is a design compromise. A significant complication is the addition of another parameter concerning optimal sunlight exposure of dwellings. According to Polish regulations, in designed areas (not inner-city) at least one room in each dwelling

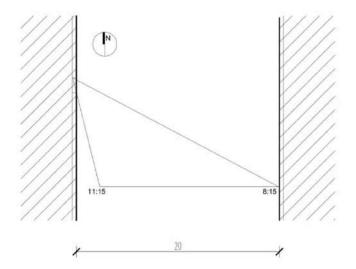


Fig.4 - Access of sunlight to the dwelling at the height of the second storey, shown on the floor plan assuming a building height of 14.5 m - Source: Author 2022

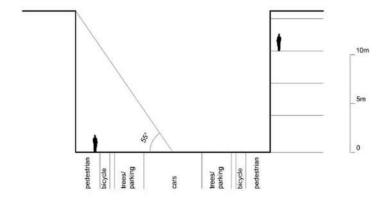


Fig.5 - The proposed cross-section of the street assuming 14.5m high buildings - four storeys with services on the ground floor - Source: Author 2022

should have a sunlight duration of 3 hours on equinox days between 7 am and 5 pm^{18} .

With a road width of 20m and the assumption of services on the ground floor of the development, natural lighting for the flats is possible at most in a four-storey development. The analysis is based on a diagram developed by Mieczyslaw Twarowski and widely used by Polish architects¹⁹. This height of development is within the parameters of human perception that Gehl and Alexander point out²⁰. The cross-section of a street with buildings up to several metres high allows visual and acoustic contact between people in the road lane and those looking out of the windows of buildings on all floors21. It is a space in which it is easier for people to form bonds. Certainly, reducing the scale and width of the street would be more beneficial in this sociological impact area of the street, but the road lane would lose its full capacity. Narrower fifteen-metre streets with buildings three storeys high could, however, function as quieter spaces complementing the basic structure of the city, where parking space in the road lane would be dispensed with. Narrower streets with three-storey buildings can also be designed as woonerfs. Where road lanes are wider, serve public transport and are the main commercial or administrative streets for neighbourhoods, buildings should be suitably taller, maintaining the greatest possible street section centre angle.

The cross-sections proposed in this article could become a starting point for planners in the creation of new urban areas as well as the completion of inadequately developed urban areas. Clearly defined guidelines as a point of reference in specific circumstances can acquire individual characteristics, as exemplified by historical cities where the clear principle of street design and the rigour of building heights seem

Rozporządzenie Ministra Infrastruktury z dnia 12 kwietnia 2002 r. w sprawie warunków technicznych, jakim powinny odpowiadać budynki i ich usytuowanie z późn. zm. (trans: Regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions to be met by buildings and their location, as amended.), chapter 2 § 60, Dz.U.2019.0.1065 t.j.

¹⁹ Twarowski, Mieczysław *Słońce w architekturze*. Warsaw: Arkady 1970.

²⁰ Alexander, *A Pattern... op. cit.*, pp. 114–120.

²¹ Gehl, Jan Cities for people. Washington: Island Press 2013, p. 35.

to be unsurpassed today, as can be seen, for example, in the space of Haussmann's Paris²².

Conclusion

The problem, that occurs with varying degrees of intensity in many cities around the world, is crucial for the future image of the city in Polish conditions. This problem is particularly relevant for cities in Central and Eastern Europe due to the devastation of cities by cheap and chaotic buildings of the second half of the 20th century and the first decades of the 21st century. Referring to historical patterns and trying to adapt them to new functional needs seems to be the most reasonable way to preserve the classical form of a street as the basic element of a city. Often overlooked in contemporary urban planning, the role of aesthetics in the proportions of a street cross-section should be more appreciated. As Troger and Eberle note "only the street can gather all citezens in one the same space. Pedestrians, cyclists, drivers and patrons of public transportation share the same space, thus representing the broadest range of public life"23. So shouldn't the proportions of such an important space be part of scientific deliberation and research? Shouldn't the cross-section of a street, apart from its functional properties, provoke an aesthetic experience? If these issues seem obvious in relation to houses, it is difficult to see why they should not become equally obvious for street space.

It is worth recalling that the cross-section is only one of the elements influencing the quality of a street. However, its appropriate scale and proportions can greatly enrich the role of active facades, appropriate functional differentiation of buildings, a large number of intersections and the presence of unique buildings that authenticate and individualise the urban composition.

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Strategic, tactical urbanism for street Pedestrianization:

A comparative study of streets in south Asian city

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Abstract

In the future, all densely populated cities will depend mainly on walkability as their essential function. Developing south Asian cities have distinct issues when it comes to street walkability. Tactical Urbanism is an emerging concept that demonstrates implementable initiatives to the public and deals with short-term low cost development, and scalable measures. In our Research, we will critically analyze two case scenarios in Chennai: one is identifying existing Tactically intervened streets, and another is potential streets with the similar characteristics without any interventions. These cases will be analyzed based on the impact of walkability conditions, active frontage concerning adjacent land use, economic activity, mode shift, and parking management. The study examines the initiative's influence on the surrounding retail stores through stratified surveys. We quantify (repeated measures) the economic impact of the Street and measure the street vendors' sales volume and pedestrian safety aspects. The study validates the findings of previous Research conducted on the same Street. We establish the impact of tactical urbanism in revenue boost and travel mode shift and provides suggestive evidence of end-users. The impact of unorganized to reorganized streets with importance to pedestrians will be discussed in detail and concluded with a strategic planning framework for walkable streets. In 2048 Chennai is projected to have a 180.49 lakhs population and 34%(61.36 lakhs) pedestrians will be on the streets in 2048(CCTS, CMP). Will the existing pedestrian infrastructure meet the expected demand?

Keywords

Liveable streets, Street retail sale, Tactical Urbanism, Repeated measures, Streetscapes

Introduction

India is today emerging as one of the fastest-growing economies in the world. Still, every bit of work has been done through theory and Methodology to plan and create walkable cities. Rapid economic growth and rampant urbanization have resulted in Urban transport crises in many Indian cities.

According to a United Nations survey, by 2050, nearly 70 per cent of the global population will be living in the cities. The rapid growth of the cities in terms of economic and social development is the reason that led to significant development problems in most countries around the world. (Azmi 2012)

Walkability has many health-related, environmental and economic benefits. It is crucial for the functioning of any city. The study will discuss the recent pedestrian-friendly development in Chennai, which demonstrates that better Walkability within towns has led to numerous indirect and direct social benefits, including giving people opportunities to increase social interaction and an improved civic sense and responsibility toward the City.

Tactical Urbanism: Definition

"Lighter, Quicker, Cheaper," - Eric Reynolds

"An approach to neighbourhood building and activation using short-term, low-cost, and scalable interventions and policies." - Mike Lydon and Anthony Garcia.

It is referred to as "guerilla urbanism", "popup" urbanism" "city repair" or " Do it yourself –DIY-urbanism". We can define tactical urbanism as the use of simple or temporary revisions to realize long term changes.

Tactical Urbanism: An approach

At the beginning of the twenty-first century, many cities worldwide suffered from diverse challenges such as an unstable economy, the rapid growth of urban areas, and the shifted population leading to congestion in the city and loss of public spaces and streets. With the boom of the vehicle industry, all the busy streets have already been converted into heavy traffic roads, which are vulnerable to pedestrians. All these conflicts led to the rise of Tactical Urbanism, which is quick, low cost, community-based, temporary, scalable & creative interventions to improve the condition of cities in both the short and long term. Tactical Urbanism is a successful critical tool for public space & street redevelopment. These initiatives reduce congestion and have a low environmental impact, and it has recreational and social value.

Site Area

The study area lies in Chennai, one of South Asia's most extensive metro cities. Two busy commercial streets have been selected for the impact analysis based on their similarities in nature, footfall, Right-of-way, and Adjacent Landuse. The Only difference is that one street is recently developed as a Pedestrian-friendly street, and another one is an Undeveloped street, which has the potential to create a Pedestrian-friendly street.

Redeveloped Street - Thyagaraya Nagar Undeveloped streets - LB Road, Adyar

Redeveloped Street - Thyagaraya Nagar

The Thyagaraya road was also called the Pondy Bazar, one of the busiest commercial Streets in Chennai. The stretch of around 800m distance is recently developed as the pedestrian plaza, designed as a space accessible for all, including women, children, senior citizens and people with disabilities, thus enabling equitable mobility and enhanced accessibility. This is the first such street promenade in the City.

The Pedestrian Plaza was developed under a smart city mission. The total cost of the project is approximately 40 crores. The 800-meter stretch of T-Nagar has been redesigned to improve that area's quality and walkability condition. This stretch extends from the Pondy Bazar police station to Thanikachalam road. Before the redesign, the Pondy Bazar was the place of a central shopping centre, having a jeweller and textile shop on both sides with lots of local vendors having their informal stalls on the roadside. It will be a very crowded area, and traffic



Fig.1 - Chennai map shows the location of selected site. Source: Author 2022

congestion will often happen due to the lack of parking facilities and the unorganized lanes leading to chaos. It lacks basic facilities like a toilet, drinking water, seating spaces, etc. The new pedestrian plaza gives the Pondy bazaar a makeover. The Greater Chennai Corporation has built the platform shop owners' business complex. All the street vendors have been shifted to that complex with appropriate facilities. (SPIRIT OF CHENNAI n.d.)

The Right of the way has been designed as giving importance to the wide pedestrian walkway with seating facilities introduced. The traffic department has suggested making this stretch a one-way movement to avoid traffic chaos and the space and promote smooth movement. Dedicated two-wheeler parking lots are introduced with a digital parking system; people can buy their parking tickets online using the mobile application of Greater Chennai Corporation. The seating spaces and tree courts have been introduced to rest during shopping and can also wait for their cabs and autos (ITDP India, n.d.).

Components of the pedestrian plaza: The plaza has been designed as a universal design like wheelchair passage for the disabled, pedestrian and senior citizen-friendly footpath, children's play area, separate ducts for telephone and electricity cable, greenery, Signage's, street furniture like seating arrangements, tree courts with shade trees, bus shelter, storm water drain on each side of the road, street arts, statues, ornamental street lights, fountains, pedestrian crossing at regular intervals, all the utility box are re-aligned for undisturbed and free movement of pedestrian crossing at regular intervals.

The 800m has been divided into three reaches to facilitate the early completion of work and facilities quality in construction without causing much disturbance to traffic flow. In reach 1 & 3, the carriageway of 7.5m wide ROW was designed on both sides of the median, and a 3m to 4.5m wide pedestrian walkaway was also introduced. In 2& 3 reaches, all types of vehicles will be allowed, with sufficient four-wheeler parking. Considering the parking needs of the people coming to shopping, a Multi-level car parking complex is being constructed. High-level facilities like commercial malls have been provided like smart toilets; battery-operated shuttle services provided infrequent, intelligent bikes, end-of-trip facilities, Intelligent parking management, etc. (SPIRIT OF CHENNAI n.d.)

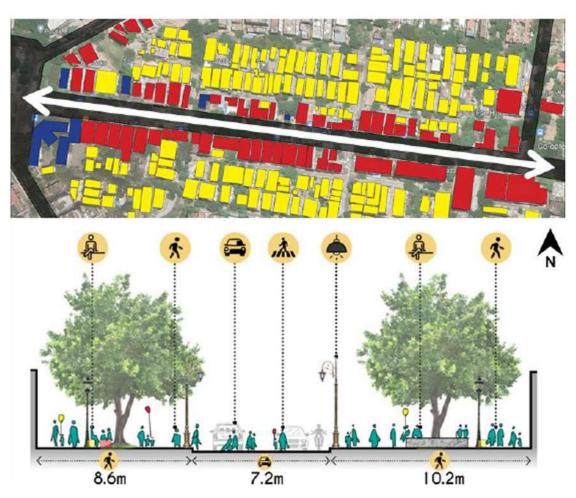


Fig.2 - Street extent & Schematic section of the Street. Source: Author 2022



Fig.3 - Present condition of redeveloped street 1) Maximized space in school frontage to Accommodate children's, 2) Active frontage of coffee shop, 3) Children's plying under supervision, 4) Well lit black spots, 5) Active Street furniture - Source: Author 2022



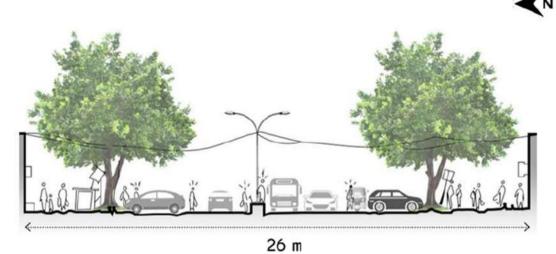


Fig.4 - Plan and Schematic section of LB Road, Adyar - Source: Author 2022

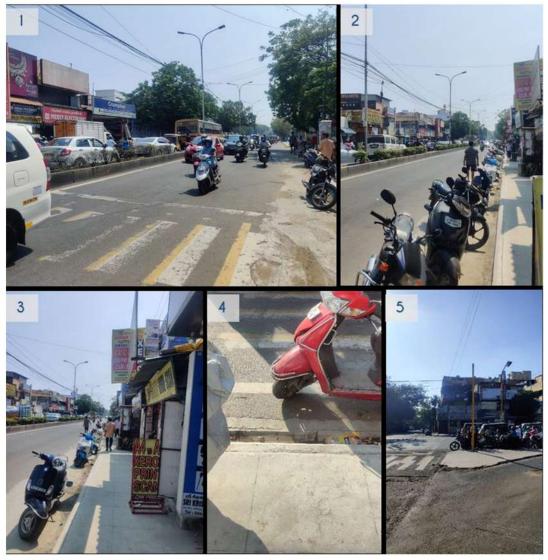


Fig.5 - Present condition of undeveloped Street 1) Vehicular centric road, 2) Lack of designated parking, 3) Inadequate sidewalk & Encroachment, 4) Lack of universal accessibility, 5) Unorganized Intersection - Source: Author 2022

The transformation of this Pondy Bazar pedestrian plaza has encouraged and invited more people to shop, walk and wander without the fear of accidents. This enhances cyclist and pedestrian safety, boosts the local economy, and fosters community interaction. The transformation of this shopping street from a car-centric to a people-centric approach leads to better air quality, health, and well-being of the users. The people enjoy the place by hosting cultural events and street festivals like prestigious 'Margazhi' concerts and activities like live dance, yoga, Zumba, street music, and storytelling. The report from the retail shop owners indicates that there is a 15-20% increase in sales after the transformation. The safer children's play area was more convenient for older people to have a peaceful shopping experience in the plaza. With the influence of this project, the pedestrian places have great scope to be replicated in various locations in Chennai. Greater Chennai Corporation has identified eight more streets for a redesign.

Undeveloped Street - LB Road, Adyar

LB Road is also one of the commercial centric roads in Chennai. It has a similar identity to the pondy bazaar in terms of commercial activities, road width, pedestrian footfalls and adjacent land use. This Street has the potential to develop as a pedestrian-friendly street.

The typical section in (Figure 4) shows the current condition of the Street, where we can observe – unorganized right of way, uneven pedestrian footpaths surface, lack of signage, undefined parking spaces. Pedestrian jumping median due to lack of adequate pedestrian crossings.

Research Methodology

Our research critically analyses two streets in Chennai: Tactically intervened streets and the potential streets with similar characteristics without any interventions. Two streets are analysed based on the impact of walkability conditions, active frontage related to adjacent land use, economic activity, mode shift, and parking management. The study examines the influence of street redevelopment on the surrounding retail stores through stratified surveys. As mentioned in Annexure, the surveys are stratified into two parts, one for the Citizens and the

other for shop owners. The survey recorded the perceptions of these two stakeholders across several street attributes. Based on that, we quantify the economic impact of the Street and measure the sales difference before and after street redevelopment.

The data was collected using primary survey, where a questionnaire was designed to understand the impact of the pedestrian-friendly streetscape on Citizen perception and shop-owner view, a pilot questionnaire was designed to investigate the understanding/impact of streetscape project among the public. The target group was Users of streets and Street shop owners. The User perspective survey was the vital measure required to shed light on the success and failures of the Pedestrian-friendly streets initiative.

The street-level Citizen perception survey has been conducted on citizens and Shop owners on two streets. The two streets considered are Redeveloped Street (Pedestrian-friendly street) & Undeveloped streets (Potential streets for intervention).

The objective of the analysis is to understand the impact of the pedestrian-friendly street intervention, which was recently redeveloped in 2019, and compare that with the undeveloped Street, which has the equivalent potential to develop as the pedestrian-friendly Street.

A total of 143 samples were collected, with 82 from redeveloped Street and 61 from Undeveloped Street. Out of 82 samples in redeveloped streets, 50 samples were from Visitors, 32 from shop owners and in undeveloped streets, 38 from visitors and 23 from shop owners.

Results

The perception survey was conducted on the citizens (users of the Street) and Shop owners. Here the shop owner survey is used to analyse the economic impact of the Street, and the citizen survey is used to understand the user perception. The analysis has been carried out with three different variables to draw inferences. The Analysis tool has a variable in X-Axis, another in Y-Axis and the No. Of samples in the box format inside the faucet denotes the third variable. We have considered two faucets of redeveloped and undeveloped to observe the initiative's impact on redeveloped streets and find the changes.

Based on the question no 1, 2 & 6 in Annexure 1the street furniture,

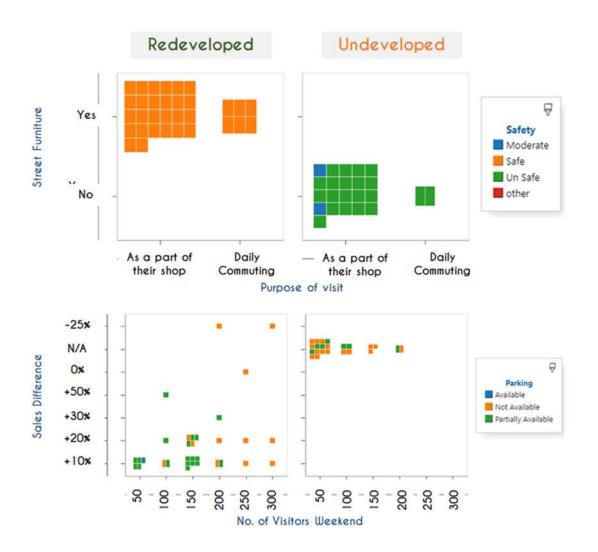


Fig.6 - Analysis of Citizen perception survey 1 & 2 - Source: Author 2022

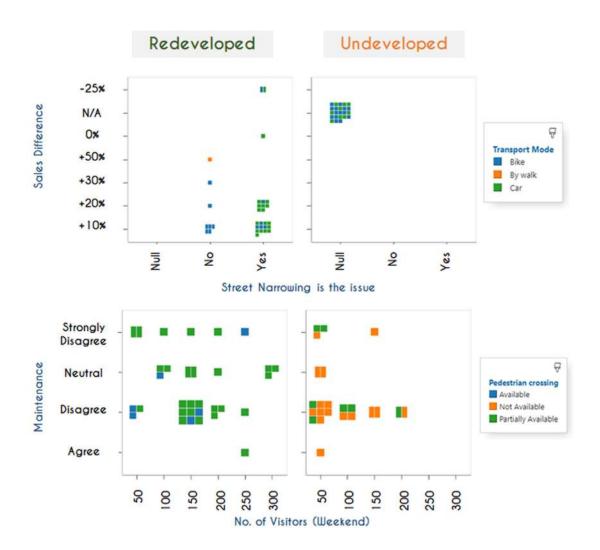


Fig.7 - Citizen perception survey Analysis 3 & 4 - Source: Author 2022

purpose of visit and safety has been considered for the first analysis. The observation of that are the Undeveloped street lack in safety measure and Street furniture. Most of the citizen say that undeveloped Street is not safe for walking.

Based on the question no. 8 in Annexure 1 and question no.1 & 3 in Annexure 2 the No. of visitors, sales difference after redevelopment and parking has been taken as the variables. The findings are after redevelopment; the sales have increased by 10 - 20%. The large shop, which is getting 200 - 300 visitors on weekends, said their sales were reduced by 25% due to lack of parking space. (They mentioned that earlier people use to park the vehicle in front of our shop. After the redevelopment., people don't have that option).

Based on question no 9 in Annexure 1 and Question No. 3, 4 in Annexure 2, the sales difference, street narrowing is the issue, and transport mode is considered the variables. As shown in analysis 3, the Undeveloped Street lacks safety measures and Street furniture. Most citizens say that undeveloped Street is not safe for walking. The Car users felt that the Street Narrowing is the issue. Because of that, they can't be able to pick up and drop them off in front of the shop.

Based on question no 9 in Annexure 1 and Question No. 3, 4 in Annexure 2, the sales difference, street narrowing is the issue, and transport mode is considered variables. As shown in Figure 7 analysis 4, there is a lack of maintenance in both developed and undeveloped Streets. Quite a good number of Pedestrian crossings are available in redeveloped Street.

Accessibility Matrix

The accessibility matrix is the evaluation methodology based on analysing different indicators related to Street Walkability, safety, connectivity, Accessibility & facilities related to various user groups with a unique concentration on universal Accessibility. A site expert observation survey has been conducted. As shown in the (Figure , the outcomes of those surveys are plotted in the Accessibility matrix format having ten indicators on the Rows and different user group on the column with two faucet for redeveloped and undeveloped streets.

We have considered the different user groups of Children, pregnant

			User Group								User Group						
		Redeveloped Street									Undeveloped Street						
	S.No.	Parameter	Children (Up to 8 years)	Pregnant Women	Elderly/senior citizen	Speech & hearing impaired	Visual Impairments	Wheelchair user	Mobility aid users	·	Children (Up to 8 years)	Pregnant Women	Elderly/senior citizen	Speech & hearing impaired	Visual Impairments	Wheelchair user	Mobility aid users
Indicators	1	Access in terms of steps/ramps	4	5	5	3	4	5	5		2	2	3	1	4	1	2
	2	Availability of Footpaths	4	5	5	4	4	4	3		1	1	į.	1	1	2	1
	3	Active frontage	5	5	5	5	5	3	4			1	1	1	1	1	1
	4	Public toilet facilities	3	2	4	2	2	2	3		4	1	3	3	3	3	3
	5	Drinking water facilities	1	1	2	1	1	1	1		4	3	3	3	3	2	2
Indi	6	Availability of signage	5	5	5	2	2	2	4		4	3	3	2	2	3	2
	7	Public seating	5	5	5	- 5	- 5	5	.5	y I	1	1	. 1	1	- 1	1	1
	8	Lighting infrastructure	4	5	5	3	3	3	3		2	2	3	1	1	1	1
	9	Obstructions	5	5	5	4	4	4	3		T	1	1	-1	4	1	1
	10	Security from crime	4	4	4	3	5	3	3		4	4	4	3	3	3	3
Ц		Very 2 -	2 - Dissatisfied			3 - Neither satisfied nor dissatisfied					4 - Satisfied				5 - Very Satisfied		

Fig.8 - Accessibility Matrix - Source: Author 2022

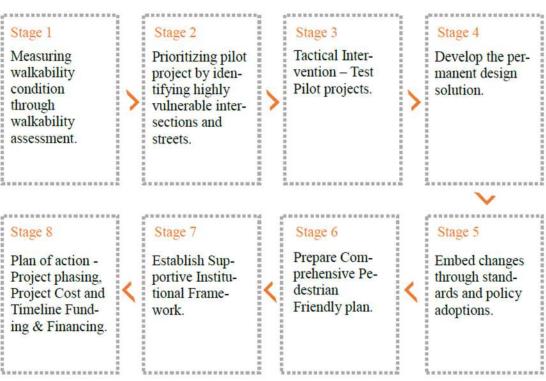


Fig.9 - Strategic Planning framework for Walkable streets through Tactical Urbanism - Source: Author 2022

women, elderly/senior citizens, speech & hearing impaired, visual impaired, Wheelchair user and mobility aid users. We observed that the redeveloped street still lacks drinking water facilities, public toilets & signage. The Undeveloped street lacks in all the indicators still in some indicators availability of footpath, active frontage, public seating & obstruction. They are very critical in condition.

Strategic Planning framework for walkable streets through tactical Urbanism

Through the critical analysis findings of two different streets. A strategic framework has been developed to address the walkability in metro cities. The framework will be the eight-step process, which includes from the pre-design to execution.

Stage 1: Measuring walkability condition through walkability assessment.

The audit is the first step to understanding the existing condition and context-specific site issues. Assess the street/Neighbourhood/city with an Assessment tool consisting of various parameters with different weights. The streets will be assessed in four categories: not suitable for pedestrian condition, poor pedestrian condition, basic pedestrian condition, and reasonable pedestrian condition.

Stage 2: Prioritizing pilot project by identifying highly vulnerable intersections and streets.

Based on the different categories of assessments, the highly vulnerable streets will be given high priority.

Stage 3: Tactical Intervention – Test Pilot projects.

Test the selected vulnerable street with the tactical Urbanism method. Implement Demonstration project: Turn Inspiration into action. Develop the implementation strategies in a three-step process.

Design - Create a Tactical Design solution addressing the issues identified in intersections or streets.

Discuss - Listening to the citizen through community participation, mapping their Issues & Creating design Solutions

Demonstrate - Implement the Tactical Intervention in the Selected intersection and street. As a 7 - 15 days Demonstration. This intervention will serve as an example of the forthcoming permanent redesign of streets and the entire Neighbourhoods.

Stage 4: Develop the permanent design solution.

Analyze before and after implications of Tactical pilot intervention. Incorporating learning from demonstration project. Conduct focus group discussion to get the citizens thoughts and comments about pilot Intervention.

Stage 5: Embed changes through standards and policy adoptions.

Adapt the guidelines, standards and policy for the streetscape design from various agencies.

Stage 6: Prepare Comprehensive Pedestrian Friendly plan.

Prepare the detailed design for implementation, which address the pedestrian, cyclist, vehicle, parking, water management, service ducting, streetlights, pedestrian-scale lights, street furniture, Shading devices (natural & artificial) & etc.

Stage 7: Establish Supportive Institutional Framework.

The Pedestrianization Subcommittee should be formed and chaired by the City Municipal Commissioner. Urban Planner or Designer will head that Committee, and the team includes an Urban planner & Designer, Transport specialist, Landscape Architect, Architect and Engineers. The streets and public places designs need to be consulted with various skate holders such as Urban local bodies, Highway departments, Traffic departments, Electricity departments, Water & Sewerage Department, Parks & Recreation departments. The sub-committee should ensure that all departments work together to implement the project.

Stage 8: Plan of action - Project phasing, Project Cost and Timeline Funding & Financing.

Pre-implementation stage to address the project costing from local, national & and international agencies. Schedule the timeline for the project phasing will be based on without affecting the existing Circulation & Activities.

Conclusion

Throughout history, streets were a means of livelihood and social support for its inhabitants. The rise of the Auto-mobile industry led to the car's dramatic world, which was the primary cause of the paradigm shift from pedestrian to automobile in the Planning process. Current

trends of Tactical urbanism and needs in streetscape design concentrate on the functional street with high priority to pedestrian and aesthetically pleasing public spaces.

This research examined the streetscapes of two famous streets in Chennai through observation and questionnaires with the users. One is a recently redeveloped street, and another is an undeveloped street with potential for redevelopment. Chennai has taken a lot of initiative for streetscape redesign and empowering Pedestrianization. Still, Chennai lacks some indicators; many areas still need further development to ensure positive social behaviour and interaction.

The redeveloped streets have good infrastructure in terms of wide pathways, ramps, public seating, and the active frontage of different shops. The undeveloped road has an unorganized Right-of-way, encroachment of roadside shops, and inefficient shading elements, thus impacting social interaction. Also, street furniture needs further study. The design of the seats should be comfortable and address the most social interaction. Although the redeveloped street has good plantations, mature trees still lack parking management and Show owner satisfaction. Sometimes, the users feel bad about parking somewhere and walking to their preferred shop.

On the other hand, the street has witnessed a 10 – 20% increase in sales after Redevelopment. Considering sales hikes, user experience, and infrastructure, the street has positively impacted the citizens. The undeveloped street completely lacks natural shading and Green cover. Further consideration should be oriented towards street illuminations, as most users use them at night due to the hot climate. Also, based on the academics' guidelines, it is essential to put some landmarks and streetscapes that engage the eye of the users with the place. Designing for the end-user and incorporating community participation is the key to success for more positive social interaction streets, indicating more recreational activities and children's facilities.

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Mobility turnaround: we make the future – mobile without a car in rural areas

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Abstract

A car in the city means a long search for a parking space and overall, a high degree of sealing. This forces negotiation processes: Parking spaces are converted; people increasingly organise their lives with other means of transport. The lived reality is forcing people to rethink and switch.

In the countryside people still drive cars. More than 90 % of households own at least one car¹, around 70 % of journeys are made by car². Here a mobility turnaround needs real alternatives to the car, noticeable push factors, and the awareness and will of the population to change.

The following text summarises the results of two projects trying to shape a convincing image of a mobility turnaround within the population. They were developed by the University of Kassel in cooperation with local and regional project partners and a focus group of citizens from 2018-2022. It shows what environmentally friendly mobility in rural areas could look like, what impacts it could have and how to achieve all this.

Keywords

digitalisation, traffic turnaround, rural areas, mobility hubs, climatefriendly mobility, sustainability

What is needed for the mobility transition

What is needed for the mobility turnaround in rural areas is, on the one hand, other mobility infrastructures and other services, but on the other hand, people's individual mobility decisions must also change. In other words: we need a social change to counteract climate change.

¹ Institut für angewandte Sozialwissenschaft (Infas) (2019) (Ed.): Mobilität in Deutschland. Verkaufsaufkommen – Struktur – Trends. Kurzreport. Berlin.

² Nobis, Claudia & Kuhnimhof, Tobias (2018): Mobilität in Deutschland – MiD Ergebnisbericht. Bonn, Berlin.



Fig.1 - Public transport in North Hesse, status quo - Source: Anna Bergold, 2021

What is needed to reach this goal is intensive communication, a campaign for the future - and rousing ideas strong enough to convince people and move them to rethink their behaviour and act differently in their everyday life. In an initial research project entitled "Building for the New Mobility in Rural Areas: Adapting the Building Structures of Villages and Small Towns in the Course of the Digitisation of Transport" (2018-2020), we developed at the University of Kassel in an interdisciplinary team from departments of "Architectural Theory and Design", Prof. Philipp Oswalt and Dipl.-Ing. Lola Meyer, "Urban and Regional Planning", Prof. Frank Roost and Elisabeth Jeckel M.Sc., and "Urban Planning", Prof. Stefan Rettich and Franziska Böker M.Sc. at the University of Kassel, different future development scenarios of rural areas with a time horizon of 2050. The project was funded by the innovation program "Future Building" by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) on behalf of the Federal Ministry of the Interior, Building and Community (BMI).

The study looked at structural changes that could result for the study region of North Hesse in the medium to long term, due to the digitalisation of transport, with special consideration of autonomous driving.

The interim results were discussed and further developed in three workshops with around 12 experts from the fields of mobility research, network operation, logistics and rural areas and with the responsible local and regional actors from politics, business, and administration as well as with the public transport authorities and mayors of the study municipalities. As a result, two central scenarios were worked out, which differ greatly in social and spatial terms.

Future scenarios "Car Country" vs. "Community Country"

Under the premise of autonomously driving vehicles (buses, trains, or cars), two future scenarios were developed for the year 2050, which differ significantly in the modal split and have different spatial effects on settlement structures, land consumption and public spaces. The "Car Country" scenario describes a future with more private cars, mar-

Building for the new mobility in rural areas: https://www.bbsr.bund.de/BBSR/DE/veroeffentlichungen/bbsr-online/2021/bbsr-online-13-2021-dl.pdf?___blob=publicationFile&v=3

ginalised public transport, increases in transport space and urban sprawl tendencies due to a significant growth of all rural settlements, especially those with currently low land prices. Public transport is severely thinned out, as autonomous driving has added even more vehicles. Such a development would further weaken the possibility to get in touch with other people and thus social cohesion: The personal car is an inherently isolated space⁴ and barren public transport stations are nothing more than non-spaces, reduced to their function of transit⁵.

The "Community Country" scenario describes a future in which shared mobility prevails and a public transport system that transports people and goods and that is convenient and flexible and can be called up at any time. This frees up land potential that can be used for other purposes – a network of safe cycle paths, qualitatively valuable public spaces and shared space areas in the villages, flower strips and areas along federal and rural roads, and settlement development along the main mobility axes in the sense of a decentralised concentration.

Innovative and sustainable mobility concept through hybridisation and pluralisation of transport

An innovative and sustainable mobility concept was developed in the research project using the example of the study area of Northern Hesse as an important building block for achieving the "Community Country" scenario. This is based on a well-timed, high-performance rail transport system with regional trains and regional trams as the backbone and an on-demand ride pooling system, initially driver-based and later autonomous, with shuttle buses for accessing the area and as a feeder to the railway. A system of digitalised ride-sharing benches will additionally open up the MIT for public transport. In addition, PlusBuses will be used, and the network of cycle paths will be expanded throughout the area and supplemented with infrastructure offers for cycling such as lockable boxes or bicycle transport in the shuttle buses. Car-sharing with different vehicle sizes and bike-sharing, also with a

⁴ Sheller, Mimi & Urry, John (2006): The new mobilizes paradigm, in: Environment and Planning A, 38: 207–226.

⁵ Augé, Marc (2019): Nicht-Orte. Munich.

range of cargo bikes and electric bikes in the individual districts, complement the concept.

Different possibilities of digitisation and an all-in-one app will create a hybridisation and pluralisation of today's transport and establish a more collaborative mobility – possibly making private cars and classic buses obsolete in the long term.

Mobility hubs as multifunctional social places

The core elements of this future transport system are so-called mobility hubs, which not only ensure inter– and multimodal mobility, but are also multifunctional, represent social places and function as an extended component of public services. The creation of such places are of inherent importance for the transformation of rural communities as they provide a strong infrastructural backbone of social cohesion⁶.

They are also multifunctional, represent social places and function as an extended component of the provision of public services. In the project, a system of 3 different types of hubs where developed, which have different equipment and functions depending on the context. The different types were spatially and structurally represented in the project by means of various typical local examples.

The Midi-Hub with PlusBuses, a digitalised rideshare bank, on-demand shuttle stops and numerous secondary functions such as a cross-provider parcel station and exchange boxes for books, fruit, and vegetables, etc., as well as a kiosk.

Old stations are revitalised and will be served by the RegioTram in the future. A farm shop, café, and co-working space complement the mobility offers and form a district centre. Through redensification at the junction, the small-town building typology will be expanded to include residential forms such as generational living and student flats.

Rural transport turnaround and freed-up spatial potentials

A rural traffic turnaround that becomes possible in this way can open up considerable spatial potential. Narrower road cross-sections, the

⁶ Ardnt, Moritz; Buschbom, Kai; Neu, Claudia; Nikolic, Ljubica; Reingen, Helena; Simmank, Maike; Vogel, Berthold; Wicklow, Dagmar (2020): Ein Konzept zur Stärkung lokalen Zusammenhalts. Bonn.

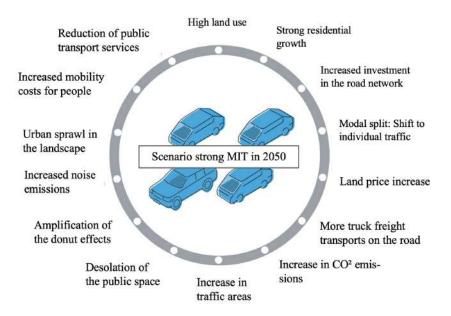


Fig.2 - Spatial and environmental aspects Car Country Scenario - Source: Own graphics, 2021

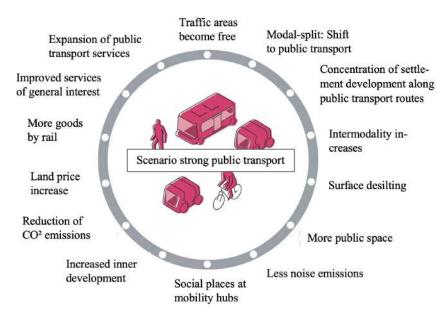


Fig.3 - Community Country scenario; Spatial and environmental aspects -Source: Own graphics, 2021

elimination of car parking spaces, one-way streets, bicycle lanes and a more area-oriented reorganisation of villages and rural roads would accompany the post (private) car era and contribute to more people-friendly and climate-friendly spaces. In the research project, numerous examples were used to outline spatial re-uses of today's traffic areas.

Political will and a realistic change

The aim of the project is to identify new perspectives for action in the context of the mobility turnaround for planning and architecture in rural areas.

In order to ensure that autonomously driving private cars do not lead to a significant increase in traffic and traffic areas as well as increasing urban sprawl in the future, but rather to a trend reversal that contributes to less CO2 emissions, more public spaces and overall, more people-friendly and climate-friendly spaces, appropriate political control and regulation measures are needed in addition to innovative mobility concepts. Public transport must be promoted in a targeted manner and at the same time private motorised transport must be regulated and priced in.

The results of this research show that a successful rural transport transition is possible – with less motorised individual transport, thus emits less CO2, takes up less land and opens up considerably freed-up spatial potential.

Another result of the research project was the realisation that it is not enough to have a good concept and to create the technical, political, and legal conditions for a mobility turnaround, but that it is central to involve the local people in the process. Intensive discussion and communication work are necessary here. Only when people as users see that something must and can change and they understand that they are an important part of shaping the future – only then will a mobility turnaround become realistic. After all, users must become the drivers of the change in transport. How is that possible?

This question is addressed by the follow-up project, which aims to turn the concept based on the research project, which has already been coordinated with the providers, various researchers, political commit-

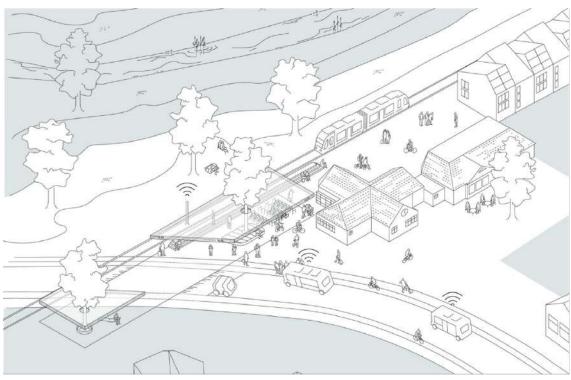


Fig.4 - Midi-Hub at the old railway station - Source: Heimann und Schwantes, 2021

tees, and actors from the administration, from head to toe – and to get the local people on board. The participation of local people, i.e., denizens, not only reinforces the acceptance of any concept planned and realized, but also plants the seed of actively (and self-reliantly) caring about and for the realized places⁷.

In the project "Real-world laboratory North Hesse: Mission Statement on New Mobility and Mobility Transition in Rural Areas" that is funded in the program "#mobilwandel2035" by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety and Consumer Protection, we are working again in an interdisciplinary team from the Department of Architectural Theory and Design, Prof. Philipp Oswalt, Dipl.- Ing. Lola Meyer and Michael Jell B.Sc., the Department of Urban and Regional Sociology, Maik Kiesler M.Sc., Philipp Theißen B.A., as well as in close cooperation with the planning and communication office Urban Catalyst from Berlin (Dipl.-Ing. Anna Bernegg and Jörn Gertenbach M.Sc.). Together with our local and regional partners and based on a coproductive and participatory process we develop a mission statement for the future.

Here, through and with the local people, a perspective for the mobility of the future is created, which also shows the first implementation steps. The first project phase 2021–2022 focused on the concept, the second phase 2022–2024 on the first implementation steps.

Status Quo Trendelburg, North Hesse

Initial discussions on site made it clear that public transport is not available in sufficient numbers and is therefore hardly used, only a few people walk, and most people who can drive do so. The situation is correspondingly bad:

Oversized streets, wild parking, huge car parks in front of discounters and narrow pavements for pedestrians, hardly any bicycle. Rural areas seem to be even more car-oriented than our cities. Considering that almost 50% of Germans live in rural areas⁸, we need a rethink and

⁷ Low, Setha & Iverson, Kurt (2016): Propositions for more just urban public spaces, in: City, 20(1): 10–31.

⁸ Joho, Kaja (2018): Landlust statt Landflucht. Die Kleinstadt wird wieder geliebt, in: Wirtschaftswoche: https://www.wiwo.de/politik/deutschland/landlust-statt-landflucht-die-kleinstadt-wird-wiedergeliebt/22918660.html

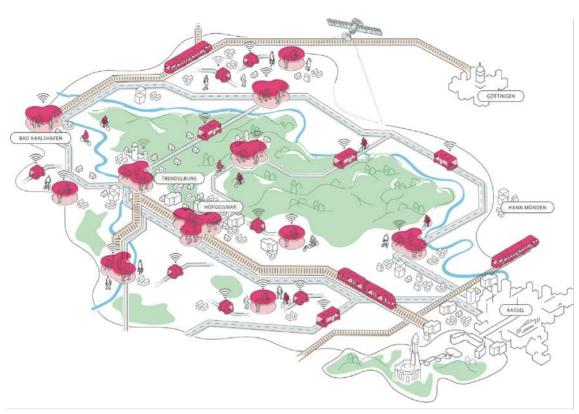


Fig.5 - Mobility concept "Community Country 2050" - Source: Heimann und Schwantes, 2021

a change in transport policy.

Good ideas already exist, and technical development does not seem to be the problem. But there is a lack of overall solutions, of desirable images, in short of images of the future that make striving for change. And there is a lack of discourse and exchange with the actors and the inhabitants of the country. This is precisely where the "#mobilwandel2035" competition fills a gap and offers the opportunity to enter dialogue and to develop a common vision and then, in a second phase, to tackle the first implementations.

Together with the local people and regional actors, the project develops an image of the future in which sustainable mobility prevails and everyone can be mobile without their own car. A future where people are not dependent on their private cars and where public space is not so dominated by cars. Where the streets are once again used in a diverse and multifunctional way, where children's play and encounters are once again possible.

The project is dedicated to the question of what our villages and small towns will look like then – and above all: it outlines steps on how to get there. In the 10-month participatory process, the building blocks of sustainable mobility described above are discussed and a mission statement supported by all stakeholders is to be developed. It is essential that this vision integrates the different requirements of the heterogeneous target groups. Our multi-perspective approach identifies conflicting goals and synergies from which solutions can be developed. A special process design was developed for the participatory elaboration, which leads to a jointly developed result via several interviews and workshops.

Thanks to the preparatory work, there was already a network of active partners, actors and decision-makers who wanted to take part in the participatory process to develop the target image. These include the county administration Kassel, regional institutions (Zweckverband Raum Kassel; Regionalmanagement Nordhessen) as well as the regional mobility provider (Nordhessischer VerkehrsVerbund).

A focus group representing the citizens was selected as an important group of actors and later multipliers of the transport transition. For this purpose, all residents between 16 and 90 years of age were contacted and invited to participate. A survey was attached to this invita-

tion to underpin the subsequent selection with aspects of socio-demographics, living conditions and current mobility behaviour.

From the 150 submissions received, a total of 15 citizens were selected. Care was taken to obtain as broad a cross-section of the population as possible. Thus, a balanced age average with a broad distribution of age groups was considered. Different phases of life were also considered, such as schoolchildren, young and established families, or pensioners – different groups that have their own individual mobility needs and behaviour. The current mobility behaviour as well as the assessment of the possibility of a future without owning a car were also used to unite different opinions and approaches to the topic.

The municipality of Trendelburg - first steps towards a turnaround

The municipality has already taken the first steps towards sustainable mobility. Since 2016, a citizens' bus has been running, driven by volunteers, and financed and organised by the town. The bus still must be ordered at least one day in advance, but in the future, this could be done much faster with an app. The citizens' bus is thus a first concrete building block towards a flexible ride-pooling shuttle. As a visible sign of the turnaround, the mayor Martin Lange has also been driving an electric car for several years, and there is a charging station for electric bicycles and cars opposite the town hall.

After the selection of the project partners on the provider and user side, in-depth interviews were conducted with the focus group. Initially, the focus was on mobility behaviour and demands, then on the awareness of and willingness for a mobility change as well as personal perspectives on the local street space. From the interview results, 7 "mobility change types" were subsequently developed, which in turn consist of three interrelated sub-themes. On the one hand, current mobility behaviour, i.e., types and reasons for current mobility. On the other hand, the mobility perspective, i.e., the question of which means of transport can offer an alternative to the status quo in the future. Finally, in between lies the so-called transformation mentality as a mediator: Under which conditions can the person imagine a transformation of their mobility, i.e.: which external as well as internal circumstances are necessary and which role (active or passive) is taken in this process? From these three sub-themes, the mobility transformation types could be derived, which move on a spectrum of openness to change.



Fig.6 - Status Quo Public Space - Source: Own photos, 2019



Fig.7 - Status Quo Street Spaces - Source: Photos: Own photos, 2019

The Future Workshop

Based on the different types of mobility change, the next step is to work out specific measures, problems, and obstacles to show how exactly and with which building blocks as well as temporal implementation steps a mobility turnaround can be brought about in which the local population is taken along.

In a two-day on-site workshop on 25/26.03.22, the focus group and the local and regional actors worked out various steps and measures that will lead to the future vision. The graphics and maps presented below are work in progress and not yet finalised result graphics.

On the first day, the participants were presented with the mobility types and asked to assign themselves to one of the types. Afterwards, the self-assessment and the assessment by others were discussed. It became apparent that the participants tended to a level more "progressive" than expected: While the "critical ones" and the "comfortable" remained unoccupied, it became apparent that most people placed themselves in the middle or closer to the "Convinced", types to which a willingness to rethink can be attributed.

The next question was: What is already possible without a car today, where is the problem and why? The participants were given a map in advance and asked to outline their current mobility behaviour and to note which means of transport they used where, when, and why. Subsequently, an alternative transport behaviour was played out in a "mobility game" – in which the building blocks of the sustainable mobility concept were used to suit the individual person and their personal journeys.

The aim of the game was to get the participants to think about their own mobility needs and to discuss which factors are particularly relevant for them when choosing alternative means of transport. At the same time, the spatially distributed routes and places of residence made it possible to gather concrete statements about the quality of the connections within the community.

While the participants imagined how their everyday routes could be travelled alternatively and how much time, costs, and flexibility this would require, the specific statements were then transferred to the central working map, which was placed on the floor in front of everyone. In the attempt to be able to cover the selected routes without their

own car, consequences were discussed on a temporal and financial level as well as regarding comfort, flexibility, and safety. Initial considerations and requirements were formulated with a view to the future:

Routes along the north-south axis already function well today, even without a car (RegioTram), while those located away from it always mean an additional effort without a car.

Already well-developed cycle paths are used gladly and a lot, but overall, a good network is missing.

The bus is perceived as not sufficient and should be expanded or replaced by an on-demand offer.

Cargo bikes, especially e-bikes, could be a serious alternative to the car for daily errands, provided they are available close to home and there is a secure bicycle parking especially at railway stations.

Carpooling and carpool banks are generally rated positively.

Target image of development

The joint final discussion laid the foundation for the vision of the future. The mapping, the "without a car" game were used to discuss the location and connections of individual villages, special connections, difficulties, and possible alternative mobility solutions. The results were spatialised and summarised on the large map. From this, on the second day, the target picture was condensed, concrete steps and requirements for short-term and long-term development were formulated.

Concrete measures

Finally, with a view to the target image, but also with a view to the second project phase 2022–2024, for which follow-up funding is to be applied for soon, the first measures and steps were formulated and depicted on a timeline between the poles of "immediate measures" and "long-term goals". The timeline offered three predefined levels:

Communicative ideas

Spatial ideas

Planning assignments/concepts

A total of 20 ideas were listed in the "Communication" column. A selection: First, there was a call for a communication offensive – websites should be created on the internet, articles placed in newspapers,

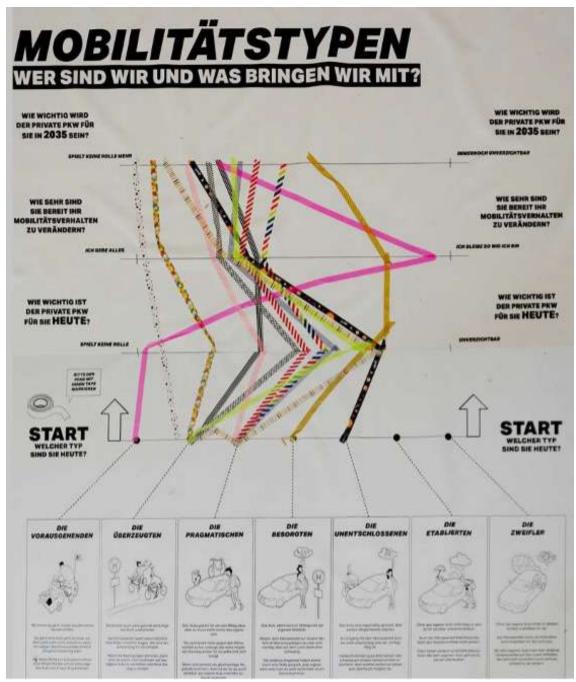


Fig.8 - Self-allocation of the people in the focus group to the mobility types -Source: Photo: Urban Catalyst, 2022

etc., to spread the topic. In addition, a car-free Sunday should be introduced to raise awareness of the issue, there should be a "flat rate for local transport" for people to get to know and a working group of residents and politicians should be founded to promote the change in transport.

In the area of "spatial ideas" (8 cards), the following measures were prioritised Temporary changes to road space, introducing bike and car sharing, building a first mobility hub, improving cycle paths. The following measures were mentioned in the concepts / planning assignments (14 cards): Prepare a feasibility study on the hub concept, on-demand offers, strengthen ride-sharing concepts, create the position of a "mobility officer", develop a cycle path concept, develop an all-in-one app, establish a mobility flat rate in public transport (365 euros a year for everyone).

The results of the workshop are still being evaluated – as a basic idea for the continuation of the project, a two-year mobility festival is planned for the second phase as a real laboratory in which the traffic turnaround can be specified and tested in the first steps, and which should lead to a broad sensitisation for the topic.

The 15-member focus group has formed well in the 10-month working process and has itself proposed to act as a mouthpiece and further initiators of the measures and to carry this into the broad Trendelburg population. The fact that such a steady participation is developing, where actors can also be won independently of the further course of the project, who function as multipliers and drivers, is a pleasing result. For it is precisely in the transport transition that the topic must leave the scientific context and enter society. The accompanying project partners, first and foremost the NVV and the district as well as the mayor of Trendelburg, are also satisfied with the result and willing to push ahead with the turnaround. This is how the future works.

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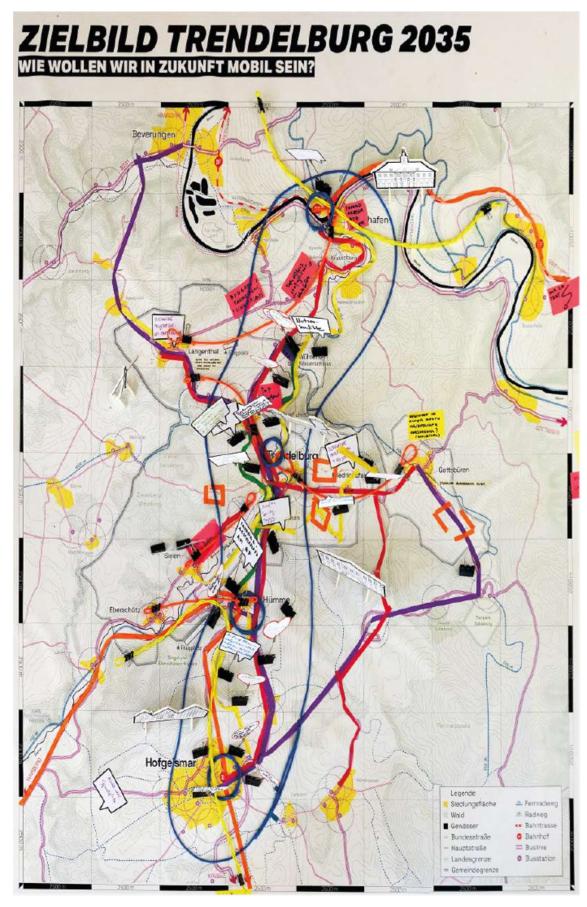


Fig.9 - Spatial target image, work status - Source: Photo: Urban Catalyst, 2022

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Fig.10 - Workshop - Source: Photo: Urban Catalyst, 2022

Public or Private! Analysing Commercial Street of Hayat Sokağı, Ankara, Turkey

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Abstract

With the expansion of consumption culture, the meaning of public space shifted from accessible socialization areas to segregated semiprivate commercial areas. Due to capital accumulation, a gradual transition of the status quo of urban commons to privatized ones has emerged. Shopping malls, as closed boxes, amplified the dichotomy in the public/private place discussion by creating a controversial sense of public place in private ownership. At the same time, in-between space as an abstract term in architecture, illustrates the transition from public program to private program. Therefore, in line with the concept of the in-between space, this study seeks to discuss public-private space transition in the case of Hayat Sokağı (Life Street) in Ankara, Turkey. Hayat Sokağı is designed as an activity area that meets the entrances of two shopping malls on the pedestrian axis within the scope of mixeduse. The study analyzes two different parts of Hayat Sokağı through planning documents and direct observation methodology. While one part is right in between two buildings and has controlled access, the following part represents a more accessible part. The research questions the functionality of the street in terms of the notion of in-between space and the impact of architectural form, as street, on the perception of social life and impact on human activities and use.

Keywords

In-between space, shopping malls, public -private dichotomy, commercial street

Literature review

Literature on public and private space provides a never-ending dis-

cussion on the distinction of these concepts. Multi-disciplinary approaches were developed to describe this distinction to overcome possible problems in urban areas. ¹ Today, not only the terms public and private space but also places that represent the transition between these two spaces are hot topics in different contexts. *Streets* are the most representative morphological forms of these transitions. Therefore, in this study, a particular street and its constitutional relation with *shopping malls* are elaborated under the concept of *'in-between'* space.

Public and Private Dichotomy

Before diving into literature about the concept of 'in-between' space, it is essential to understand the concepts of public and private space. Nissen defines the 'public spaces' very abstractly as physical spaces that are open to all.¹ These physical spaces are mainly described as urban public spaces such as parks, public buildings, public streets, etc. As much as public spaces, it is essential to describe the private space because notions of public space cannot be captured without understanding the notion of private spaces.

From a broad perspective, the definition of the public and private space consists of two fundamental concepts; *usability* and *ownership* and their relations to morphological characters. Nissen highlighted that public ownership of the places is inadequate to describe a place as a 'public space.' Instead, public usability became more descriptive in this context. Low and Smith define this uncertainty with the *access* rule. Control over the entry of places and rules of use are the main differentiators of public space from private space. Therefore dimensions of *'unlimited access'* and *'usability'* became vital to describe the public space.

The differentiation between public and private is also related to attitude toward the space³. The dichotomy of the public and private is

Nissen, Sylke. "Urban transformation from public and private space to spaces of hybrid character." Sociologický časopis/Czech Sociological Review 44, no. 06 (2008): 1129-1149.

² Low, Setha, and Neil Smith, eds. The politics of public space. Routledge, 2013.

³ Panerai, Philippe, et al. Urban forms: the death and life of the urban block. Routledge, 2004.

mainly elaborated through the morphological elements of the space, thus street, lot, block, building, and their interrelations. Street, for example, is defined as the public front and its main characteristics defined as the "existence of a collective space strongly demarcated in relation to the public and private spaces." Additionally, the block is studied mainly as a private component of urban structure but also with its "connection between external and internal spaces, between private and public life." Therefore, the question arises here is what are the transitional morphological elements that defines in-between spaces and what are their relations.

Morphological characteristics play a critical role in urban environments in defining the threshold between public and private in urban interfaces. The boundaries between publicity and privacy are defined as transitional zones where they have the capacity to create diverse identities and enable or limit the intensity of street life. Based on the criteria of 'permeability, sociability, and activity,' Gehl defines the relation between 'soft' and 'hard' urban interfaces.⁴ The typology proposed by Gehl mainly focuses on the 'ways of urban interfaces can effectively contribute to public space'.⁵ Meanwhile, the classification of interface types presented by Bobić was developed mostly based on 'transparency, setback, and behavior'. ⁶ Additionally, Crawford defines the essence of publicness as "depends on how users are permitted to experience, evaluate, negotiate, and appropriate space to meet their own needs".⁷

Ewing and Clemente draw a qualitative and quantitative framework encompassing "imageability, enclosure, human scale, transparency, complexity, legibility, linkage, and tidiness" to address the physical

Gehl, Jan. ""Three Types of Outdoor Activities," "Life Between Buildings," and "Outdoor Activities and the Quality of Outdoor Space": from Life Between Buildings: Using Public Space (1987)." In The City Reader, pp. 586-608. Routledge, 2011.

⁵ Kamalipour, Hesam. "Mapping urban interfaces: A typology of public/private interfaces in informal settlements." Spaces and Flows: An International Journal of Urban and ExtraUrban Studies8.2 (2017): 1–12.

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⁷ Caldeira, Teresa. "Variations on a Theme Park: The New American City and the End of Public Space." (1994): 65-67.

setup and the functionality of public space. Additionally, researchers add the two more dimensions of publicness as core measures, thus accessibility and ownership. From another perspective, Els adds that 'safety' (i.e., CCTV cameras, security guards, blank facades, etc.) and 'appropriation' (visual signs such as outdoor seating and user-contributed planters, artwork, buskers, and the like)' plays a critical role to define public and private space.⁸

From another perspective, today, the public sphere is under the immense pressure of consumerism culture. One might ask whether it is still possible to talk about public space in the age of highly modernized industrial society? According to Arendt, the public signifies that "... everything that appears in public can be seen and heard by everybody and has the widest possible publicity. For us, appearance- something that is being seen and heard by others as well as by ourselves- constitutes reality".9 However, in contemporary cities, the reality is a bit different. Some public activities are carried out around the privately owned lands where they are mainly surrounded by walls and controlled all the time, which causes limited visibility. This undoubtedly brings about a public and private dichotomy as Crawford mentions that a mall "incorporated more and more of the city inside its walls."7 The public and private place dilemma is one of the contradictions that today's cities face, which is the concern of long-lasting and seemingly never-ending academic discussions.

In the same line, Habermas describes the public spaces with unrestricted right to use and open access to citizens, while he describes private spaces with constraints on the right to use these spaces. ¹⁰ Here the question arises: what happens when these rights are transferred? In the case of public places owned by private associations, when private places are open to public usage, or when public places such as streets

⁸ Leclercq, Els, and Dorina Pojani. "Private, hybrid, and public spaces: Urban design assessment, comparisons, and recommendations." *Companion to Public Space*. Routledge, 2020. 249–266.

⁹ Arendt, Hannah. "The Human Condition, with an introduction by Margaret Canovan 2nd." (1958).

Habermas, Jurgen. The structural transformation of the public sphere: An inquiry into a category of bourgeois society. MIT press, 1991.

and squares have controlled entries, new conceptual places occur. In the literature, some examples to describe these places are; 'al-fina', 'hybrid places', 'life between', '2' 'third place', or 'in-between spaces', '4', '5' etc.

Under the heading of privatization of public space, the concept of 'in-between' needs to be elaborated in detail to draw a comprehensive perspective to the context of this study. In general terms, Wun describes 'in-between' space as "an abstract space of architecture, which takes an intermediate relationship between solid." 16 'In-between' space connects outside from inside; transitions from public program to private program; and allows lights and air to filter into the solid space"16. As a parallel description, Park highlights the 'in-between' space with reference to Aldo Van Eyck and Herman Hertzberger "as an intermediate space between opposite elements such as whole and parts, inside and outside, open and close, central and decentral". 17 To define the space between interior (private) and exterior (public), the concept of in-between space can be used to clarify the uncertainty of some transition nodes of the city. A typical example could be to describe the privatized streets, which represent a prevalent example of public spaces in terms of accessibility and usability.

Nooraddin, Hoshiar. "Al-fina', in-between spaces as an urban design concept: making public and private places along streets in Islamic cities of the Middle East." *Urban design international* 3, no. 1-2 (1998): 65-77.

Gehl, Jan. ""Three Types of Outdoor Activities," "Life Between Buildings," and "Outdoor Activities and the Quality of Outdoor Space": from Life Between Buildings: Using Public Space (1987)." In *The City Reader*, pp. 586-608. Routledge, 2011.

Oldenburg, Ramon, and Dennis Brissett. "The third place." *Qualitative sociology* 5, no. 4 (1982): 265–284.

Patterson, M. "In between public and private: Emerging spaces in cities." In Emerging Realities: A Social Sciences Graduate Conference, University of Waterloo (Oct. 2011). 2011.

¹⁵ Cvetković, Marija, and Eva Vaništa Lazarević. "The image of the city vs. semi-public spaces of shopping malls: case study of Belgrade." (2016): 481-487

¹⁶ Wun, CHEUNG Nga . "The Space In – Between Design An Alternative Prototype Between Commercial (public) and Residential (private) ". China. (Design report), 2011.

Park, Hohyun. "A Study on the meaning of in-between space in Sou Fujimoto and Bernard Tschumi's Architecture." *Korean Institute of Interior Design Journal* 24, no. 6 (2015): 87–95.

In his well-known study Life in Between Buildings.¹², Gehl mainly focused on outdoor activities among the physical structure of the cities that contribute to the interaction between people and social life. Gehl highlights that physical planning has a considerable influence on "the extent and character of outdoor activities," which shapes the concept of life between buildings discussed in the book's context.

Just as it is possible through choice of materials and colors to create a certain palette in a city, it is equally possible through planning decisions to influence patterns of activities, to create better or worse conditions for outdoor events, and to create lively or lifeless cities.¹²

In other words, in Gehl's conceptualization, the activity of people is not something separated from the physical environment and quality of design. Another concept of place discussed in the current academic literature is the concept of third places. According to Oldenburg & Brissett, "third places exist outside the home and beyond the 'work lots' of modern economic production". 13 People gather in these places to enjoy their company. However, they are differentiated from business clubs, in which people come together to achieve some formal goals. In The Great Good Place on the other hand, Oldenburg emphasizes equalizing aspects of the third place. 18 Oldenburg argues that third places can be "open to all and by emphasizing qualities not confined to status distinctions current in the society."18 In the concept of third place, regardless of one's station of life, the attractiveness of the personality is what counts. In this line, parallel to the aforementioned concepts, the in-between space concept is framed to understand the uncertainty between public and private space. In this case, as privatized public space, a street, to draw a broader perspective is analyzed. It is aimed to go into detail to clarify in-between space by taking this street which has been designed in relation to two shopping malls.

Public-private place and shopping malls
Urban forms shaped between the public and private spaces as third

Oldenburg, Ray. The great good place: Cafes, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community. Da Capo Press, 1999.

places or spaces in-between are diverse. In this context, shopping malls play a central role in reconstructing these transitions between public and private spaces. Constituted by private ownership and being open to the public based on consumerism, shopping malls are far above their constitutional aim. When Victor Gruen designed the first shopping mall as a basic unit of urban planning, the objective was to propose it as an alternative for the city center, an alternative with multi-purpose. While the solution works in the fringe of American cities, today, especially in developing countries, shopping malls are constituted as an important element of urban areas and are they mainly located in the central part of the cities. Gruen provided an alternative to central commercial areas and provided all places of consumption, interaction, and activities such as cultural, artistic, social events, etc., in one single unit. They are designed as 'shopping towns'. 15 In this simulation of town, city streets took place with shops and small squares, with cafes around these squares under the roof of the mall. At the same time, public places are also increasingly converted and tied to consumerism.¹⁴ Given the illusion of public spaces, it became very hard to distinguish the shopping malls and public squares. Patterson highlights that in places where the center is lacking, malls have become one of the only places where people can be 'in public' and interact. At the same time, it is inevitable to observe them by simulating the urban centers. Malls are easily adapted to the city's criteria and falsely declared as public spaces where people can shop and interact in a safer environment. Instead of gathering in public squares, people saw malls as a better option where they were welcome as long as they adhered to established consumerist forms.¹⁵

In these new falsely shaped forms of public places, there is a shift from control over public authorities to commercially oriented bodies. 14 This raises the question of the traditional distinction between public and private space. In these new forms, security measures are considered high standards. A new debate and engagement that designers should consider is the- private security guards and surveillance cameras became part of this new version of public places and took place also in streets and other elements. As in the given definition in the beginning, public places are open to high accessibility and freedom to use the urban areas. In the meantime, this new form of 'control mechanism' takes place and brings the end of public places.

Methodological approach

In light of the above–mentioned concepts, the analysis is conducted on an exemplification case of Hayat *Sokağı*. Hayat *Sokağı* is designed between two surrounding shopping malls and creates an environment of interaction and consumption simultaneously. As an 'in-between' space, Hayat *Sokağı* represents the transition between being public and private space. In this line, the methodological approach is constituted by a twofold approach. Firstly a brief design process of Hayat *Sokağı* is presented in relation to surrounding shopping malls. For this purpose, a brief analysis is conducted in line with the studies that took place in Hayat *Sokağı*. Additionally, to understand the design process, the approach of the designing office of Hayat *Sokağı*, Promim Landscaping Urban Design, is summarized. Secondly, an observation study is conducted in the area to observe people's behavior and the usability of the street in relation to the surrounding shopping malls.

To better understand the design of the street and its aim, a short analysis is conducted with the designing office of the street. The questions are shaped to understand: the process of the privatization of the street, the aim of the design, the relation between the street and surrounding buildings and their design, and lastly, the control mechanism over the street and its impact on the accessibility and usage.

Case study and evaluation of results

Hayat *Sokağı* is designed as part of two main buildings named Armada shopping centers. The first building (see figure 1, a) was constructed in 2002. After that, as part of the green belt and pedestrian circulation together with Hayat *Sokağı*, the construction of the second building as a shopping mall (see figure 1, b) was finalized in 2012.¹⁹ Before the construction of the second shopping mall, the street was open to public usage (mainly as a parking lot) and used as a connection to Eskisehir road, one of the main arterial roads in Ankara (see figure 1, a). The street is constituted of 2 parts. One part is right in the middle of the

Ozar, Betül. "Mekan algısı ve psiko-sosyal kalitenin ölçülebilirliği üzerine bir araştırma: Armada Hayat Sokağı örneği." Master's thesis, Sosyal Bilimler Enstitüsü, 2018.

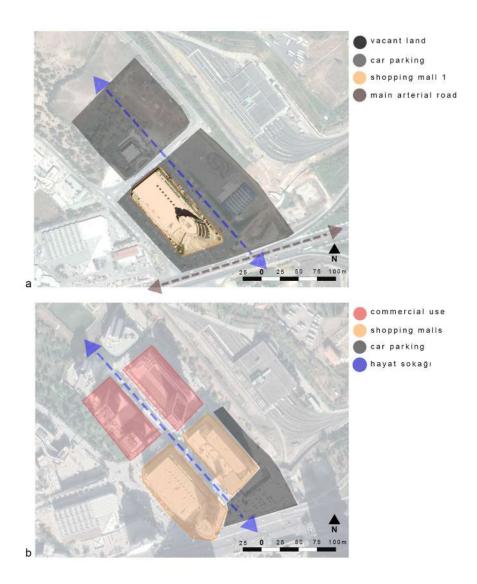


Fig.1 - a: Hayat sokağı and surrounding 2007, b: Lifet street and surrounding 2020- Source: Google Earth Pro 2022

shopping mall, where entrances are controlled. The second part has an open access and is mainly surrounded by restaurants (see figure 2). Hayat <code>Sokağı</code> is surrounded by business districts, mainly plazas. As shown in figure 2, there are direct entries from the street to the surrounding shopping mall. Shopping entities and restaurants face the street from both sides. In addition to other entrances that provide direct access to the surrounding shopping malls, two main entrances are provided from the street. The street is designed with small squares and fitted to the slope with design solutions. Additionally, two parallel passages-bridges are constructed to procure the transition between two shopping malls. These passages start from the second floor of the buildings.

Plans show that, although building 1 (shopping mall a) presents a connection with the street, it is relatively weak compared to building 2 (shopping mall b), which is designed with the street (see figure 3). The internal structure of building 2 is mainly based on the circulation starting from the street and leading to the exit to the street (see figure 3). As mentioned above, controlled access to the area significantly impacts public and private spaces. In the case of Hayat Sokağı, controlled entrances are not from the entrance of the surrounding buildings but the two street entries from both sides. This proves that although Hayat Sokağı is open to the public, having controlled entrances with x-ray machines and security guards creates a private environment rather than a public place.

Hayat *Sokağı* is not only linked to two surrounding shopping malls but also plazas around it (see figures 1 and 2). This raises the question of users that attract. Having restaurants facing all along the street and at the last floor of the shopping mall attracts many office workers at lunchtime. Office workers mainly pass the security not to use the shopping mall for shopping but the street to meet the need for food and socialization. Google data²⁰ provides the daily usage per hour and shows that the most crowded times are from 11 am to 4 pm on weekdays. This proves that office workers play an essential role in this circulation.

Google Maps-Popular times provided in daily basis

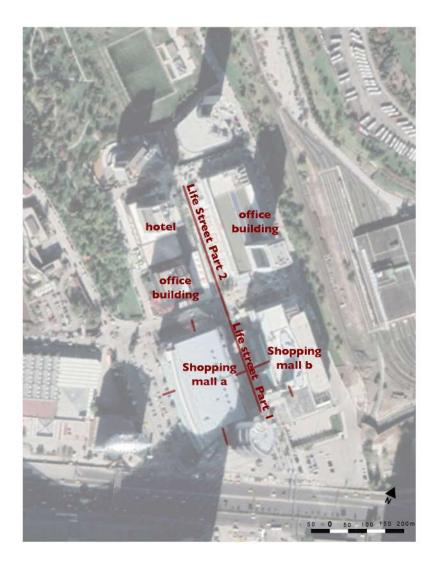


Fig.2 - Structure of Hayat Street and surroundings- Source: Google Earth Pro 2022

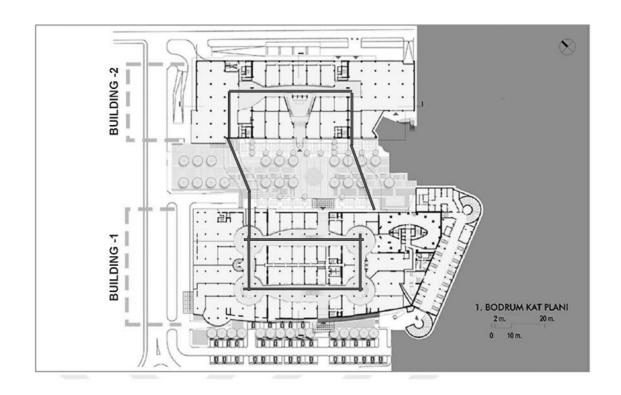


Fig.3 - Hayat sokağı Part 1 building plans - Source: Ozar, 2018

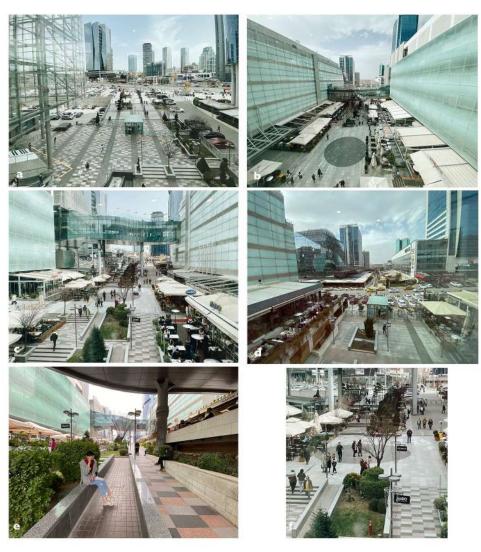


Fig.4 - Hayat sokağı - in line a: Hayat sokağı first part main entrance, b: Hayat sokağı first part surrounding buildings and entrances, c: Hayat sokağı first part design, d: Hayat sokağı first part second entrance from office area, connection to second part, e: Hayat sokağı first part landscape, f: Hayat sokağı first part landscape, f: Hayat sokağı first part second entrance from office area, connection to second part - Source: Site visit by Authors 2022

The organization also provides usage of the street for certain hours after 10 pm for entertainment and social activities while shopping malls are closed at 10 pm. Compared to the second part of the street, where there is no control at the entrance, the usage of entertainment places in the first part is rather limited.

In the second part of the research, an *observation* study is conducted in the area to obtain data on the *usability* of the area. The first observation is conducted on physical structure and relation to the usage, then people's behaviors are observed. The questions arisen are; are they using the area just for commercial activities, do they use the street as a passage to shopping malls or for other purposes, and what is the behavior of the users after they enter the street. The observation took place at different hours of the day, at lunchtime from 12 to 2 pm and from 2 to 6 pm, on weekdays and on the weekend between the same hours.

Results show that; physical form affects the entrances and usage of the street. There is a clear distinction between the first and second parts of the street. Thus, the control mechanism has an impact on the use of the street. Observation results show that the connection of the entrances between the first and second part of the street is entirely closed by cars (see figure 4– d,f). There is an explicit interruption of the continuity due to another street cutting the Hayat *Sokağı* and causing mass traffic congestion.

Moreover, benches, landscaping, and street design create a big difference between these two parts of the street (see figure 4- c, e, figure 5). While the first section presents a more interactive environment, the usability of the second section is rather limited (see figure 6- c, d). The first reason can be highlighted as the landscaping and interactive design of the first section. The second reason is the clear definition of the border of surrounding buildings in the second section. The second part of the street is designed as a somewhat inactive area. The monotony of the design is reflected in the behavior of the users. It creates the impression of an area consisting only of food consumption, where only certain activities are carried out. Although there are restaurants and cafes in the second section, it is not preferred because of the visible line between buildings and the street. This limits the interaction and creates a sense of emptiness in the area. The overall design, including the use and placement of urban furniture, does not allow people to interact.









Fig.5 - Hayat sokağı - in line a: Hayat sokağı first part, , b: designed benches, c: street elements, d: bridge (connection between building), - Source: Site visit by Authors 2022

In the first part, on the other hand, even if people do not use the commercial units connected to the street, they can be together because of the design of the street that provides open space for gathering.

Entrances to the building also create the distinction between users. As seen in the plans, building 1 has four more entrances that are not directly linked to the street. Therefore, people who want to use the shopping mall mainly use those entrances to access the building.

The first part of the street was designed based on the human scale. This caused the usage of different elements beyond the design proposal. Figure 5, represents the detailed investigation of these morphological elements. Figure 5,a, describes the design solution for the leisure/resting areas for both external and internal users. However, as shown in Figure 5, b, some areas are also used for the same purpose because of the detailed design perspective on the human scale. Although the elements are not designed for resting/leisure purposes, it is observed that people are using those areas for short breaks or other purposes. Additionally, as shown in Figure 5, d, the bridges are designed to create permeability in the 3d dimension to be used for different purposes. The bridges were planned to increase the interaction between the buildings, but it can be seen that the bridge could not act as an intermediate element to provide this interaction. The lack of a clear definition of the entrances of the bridges is one of the reasons for this situation. Although in plan details, building-2 is designed in relation to bridges, for building-1, it is hard to define this connection. It has been observed that the transition between buildings is frequently made at street level.

Additionally, people's behaviors show that they are using the street not only to enter the shopping mall but also as a place of socialization and consumption. Especially during hours between 12 and 2 pm, entries are limited on street level. After passing the controlled X-ray gates, people stay around the street and spend time socializing in the area. The behavioral observation shows that every element and design structure has a big impact on peoples' behavior and the way they use the street. The squares, benches, texture of pavements, colors, and other design solutions provided with the slope create small interaction areas and space to rest for the external users, people working in the shopping mall, and the restaurants (see figure 4-e). As mentioned above, although two passages in the shape of a bridge are provided between two shop-









Fig.6 - Hayat sokağı in line a: Hayat sokağı second part entrance, b: Hayat sokağı second part design, c: Hayat sokağı second part landscape, d: Hayat sokağı second part landscape - Source: Site visit by Authors 2022

ping malls in 3rd dimension, the usage of those passages is very limited (see figure 4-c).

Observation results also give the details to answer the question of the users' profile. As stated above, users are mainly office workers using the area during their free or leisure time. Additionally, the area is used by youth groups, especially during the weekends. Having different types of facilities, such as restaurants along the street, and a gym in the shopping mall, attract users to use both the shopping mall and the street simultaneously.

Conclusion

Especially in the field of architecture and planning, discussions in public and private places have an important place. Public spaces mainly refer to land uses such as parks, squares, and streets, whereas private spaces mainly comply with buildings, etc. Yet it isn't easy to put one single definition of public and private space. However, the literature presented shows that today is harder to distinguish between public and private places. Especially in the case of shopping malls and the example of Hayat Sokağı presented here, there is a need to define these places. In this case, not being part of public or private space, the street is analyzed in the context of 'in-between' space. An observation methodology is conducted, and the street is analyzed in terms of accessibility and usability. Initially permeability between buildings and surroundings is analyzed. The results show a parallel structure with the presented literature— under the privatized constitution, a transition of the street from public spaces to in-between spaces. Internal, false sense of publicness is supported by the street. The street's role cannot be fully defined as a public space due to accessibility issues but cannot be described as fully private because of usability and design solutions provided for the street. Therefore, Hayat *Sokağı* presents a clear example of in-betweenness. Hayat Sokağı draws twofold perspective. It creates a new perspective on the concept of shopping malls, from closed boxes to interactive open areas, still being in the center of consumerism. Hayat Sokağı as an in-between street creates another discussion on the public-private debate. Privately owned areas open to the public (in our case, shopping malls) create the opportunity for more pleasant areas for the users based on the activities and entertainment events. However, these places

are under constant control (with security guards, surveillance cameras, etc.). This study provides a general framework for a more comprehensive approach to urban and architectural design processes. The study's findings also support the argument that the current privatization trend changes public place practices. In this context, it should be emphasized once again that to increase public interaction, designers from any field should consider the design process as a whole by referring to criteria such as proximity, closure, accessibility, and permeability. The findings also point out new discussion on the significance of *micro-scale typolo-gies* and their importance on definition of the place for the factors at different scales, from urban furniture scale to building typology.

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Streets as place for agreements: the legacy of municipal management in São Paulo 2013/2016

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Abstract

The administration of the city of São Paulo between 2013 and 2016 has not yet been adequately evaluated. Some scholars recognize it as one of the most progressive innovators, while critics call it one of the worst the city has ever had. In the last year of his administration, it received the Bloomberg Philanthropies Mayors Challenge Award in recognition of innovative policies. On the other hand, it was the first mayor defeated in the first round of the election.

Although its successor announced that he would "undo" the mistakes of the defeated government, its main proposals remained or were expanded five years later. Its permanence shows that public policies for open spaces associated with the road network significantly impact the practices and habits of citizens and can be longer-lasting than built works. This article will focus on the role of public policies for the street system as a process of negotiation and agreement on new daily rules between different agents and social groups. For this, we analyze mobility policies and the promotion of public life in urban open spaces in the goals plan.

Finally, we show how streets are fundamentally a place for constructing negotiations and pacts, shaped by society, which shape society. It is the role and legacy of progressive and democratic management to expose conflicts and disputes on the roads and contribute to the advancement of the social, cultural, and environmental agendas of the entire community.

Keywords

urban policies; public management; urban mobility; urban agreements; streets

Introduction

The article seeks to show that streets are a place for negotiating pacts and rules that, although immaterial, can constitute important and

lasting legacies for cities. The physical works resulting from these pacts are the materialization, often subtle and insignificant, of the processes of discussion and agreement that can change the activities, possibilities, and meanings of public spaces.

The regulation that defines what can and cannot happen on the streets are not stable; on the contrary, they must be permanently revised and complemented by the new demands and issues that arise daily in cities. Most of these rules are defined within the municipal prefectures. The civil and traffic codes are sets of federal laws that apply to all cities; meantime, the regulations that limit speeds, activities, and discipline uses are established locally by the municipalities.

Throughout the history of São Paulo, many actions have been marked by high-profile road works, such as the opening or widening of streets or the construction of viaducts and bridges. It is customary to imagine that these works are the most permanent and significant legacies.

We will seek to show that changes in the rules that govern activities and street management are "works" that can be as significant and lasting as the built works.

Methodology

The Organic Law of the Municipality of São Paulo requires the newly elected mayor to inform, within 90 days after taking office, his goals and the metrics for each of them, publicly assuming the commitment to fulfill them. This document is public and should guide the actions during the four years of management. I highlight the goals related to regulating uses and activities in the streets and verify their permanence and continuity after the end of the tenure.

The 2013/2016 administration of Mayor Fernando Haddad consolidated its goals in 35 public hearings and publicized them. The Plan established 123 Goals, but in addition to the more quantifiable aspects, such as the construction of health and education facilities, I will evaluate those related to the regulation and management of street spaces.

The management faced financial and political crises, in part due to the lack of support from the federal government and at the same time due to the rejection of the administration of President Dilma Rousseff from the same party. In 2016, Haddad sought re-election but was defeated in the elections because, at that moment, the press and the population heavily criticized his proposals. His successor was elected by announcing his intention to undo his "mistakes" and managed to be re-elected in 2021. Now, six years after the end of his administration, we can make the first assessment of his legacy.

Results

Goal 73 announced the intention to implement 42 areas of open Wi-Fi connection with signal quality and stability; the goal was surpassed in April 2015 with the opening of 120 public places connected through the Free Wi-Fi SP Program. Internet access in these places was free, an actual digital inclusion strategy for the poorest population. Monitoring users in the squares at the end of the management found an increase in frequency, expansion of hours, and length of stay. In addition to installing antennas, no changes were made to these spaces, which continue to rely on the service today. The two following administrations included in their plans of goals the expansion of the program.

Goal 76 proposed the improvement of 32 public spaces and neighborhoods (one for each of the 32 boroughs) and about 500 public spaces renovated. The requalifications did not constitute significant works, coming closer to the idea of maintenance and adjustments. These interventions had little visibility, repercussion, and continuity. Only the Centro Aberto program was significant.

Goal 88 foresaw the planting of 900 thousand tree seedlings on public sidewalks, central beds, and in the Green Area System; it was also far from being met with planting just 363,319 seedlings throughout the city. The following two administrations also set planting goals; the 2017/2021 administration set a goal to plant 50,000, and the plan for 202/2024 proposes to plant 180,000. In this aspect, no administration managed to properly increase urban afforestation, not even a consequent afforestation plan on the scale of the challenge.

Goal 93 foresaw the project, the bidding, guaranteeing the source of

The Haddad Management was succeeded by João Dória Management, who governed the city between January 2017 and April 2018 (when he left to be elected governor of the state of São Paulo); his deputy Bruno Covas completed the management and was re-elected in 2020. With the death of Covas, his deputy Ricardo Nunes took over the administration in 2021.

financing, and the construction of 150 km of bus lanes. It was one of the most ambitious goals and gave greater visibility and identity to management, although it was only partially achieved. 42.3km of bus lanes were built or upgraded, less than a third of the target. The following administrations did not expand the existing corridors, not even those planned.

Goal 96 foresaw the implementation of 150 km of exclusive bus lanes; as the lanes were implemented, with significant gains in travel times, reducing the average travel time by 38 minutes/day, the plan was expanded. Between 2013 and 2016, 423.3 km of exclusive public transport lanes were implemented to the right of existing roads. There were only 90 km; in 2016, 513.3 km of specific bus routes were in operation.

Goal 97 announced the implementation of a 400 km network of cycle paths; 447.4 km of cycle paths/cycle lanes and 30.3 km of cycle routes were implemented.

Goal 102 foresaw the expansion of the Pedestrian Protection Program, reaching wide avenues and places with intense pedestrian circulation. Reductions at maximum speeds allowed within the city's urban perimeter aimed to improve user safety conditions.

With all the measures taken in recent decades, CET reports that the mortality rate from traffic accidents in São Paulo in 2020 was 6.56 deaths per 100,000 inhabitants, the same number since 2017, with a reduction of 7,2% compared to 2016 (Fig.01). Since 2011, the drop was 45.3%, but the number has remained the same since 2017.

The Municipal Transport Department, through the Traffic Engineering Company (CET)², implemented, between 2013 and 2016, twelve areas of reduced speed, the so-called "40 Areas"³, to increase the safety of pedestrians and cyclists.

In addition to the goals set out in the initial Plan, the 2013/2016 administration was marked by two crucial road-spaces policies: Paulista Aberta (Open Paulista) and Street Carnival.

² Traffic Engineering Company – CET. Available in: http://www.cetsp.com.br/consultas/seguranca-e-mobilidade/area-40.aspx. Accessed on: April 15, 2021.

³ Zones with a maximum speed limit of 40 kilometers/hour, around 25 miles/hour

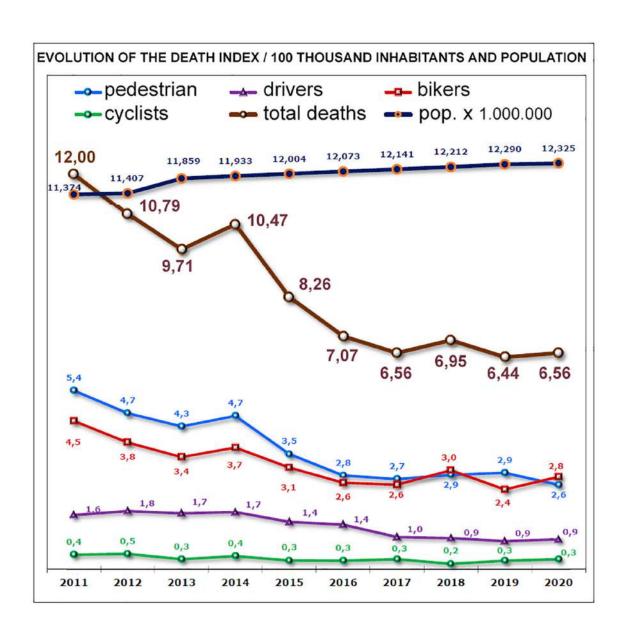


Fig.1 - Evolution of the death index / 100 thousand inhabitants and pop. - Source: PMSP CET 2020.

Open Paulista was an action taken by the City of São Paulo based on a proposal prepared by society's collectives. The initial proposals were much more modest, closing only a part of just one of the avenue's lanes on Sundays. The city accepted the suggestion, opened up opportunities for testing, and supported the assessment that reached the current format of full closure from 10 am to 6 pm every Sunday.

Since its implementation and consolidation, no politician has questioned this program. During the Covid Pandemic, it was discontinued, but soon the social distancing measures were loosened; Paulista was reopened and taken by thousands of people every Sunday.

The success of this initiative was so great that they soon proposed similar initiatives on other streets in different neighborhoods. Decree no 58,425 of 20184 entrusted the Municipal Department of Sport and Leisure (SEME) with the coordination of the program, in partnership with the Subprefectures and the Traffic Engineering Company (CET) to offer the streets as public spaces for leisure, coexistence, and recreation. The Open Streets Program selected a street in each neighborhood to be open to pedestrians, cyclists, and children on Sundays; the program continues to this day.

Street carnival in São Paulo was ordinary until the end of the democratic period, in the 1960s, when it began to be repressed by the police. Until 2012, street blocks only took place in Luz neighborhood. In January 2013, the block associations presented the manifesto to the then culture secretary of the city of São Paulo, who, in response to the entity's claims, said he recognized the legitimacy of street carnival "as an important form of expression and cultural occupation of the public space of the City."

In 2012 paraded only 20 street blocks; in 2013, there were 45, so for no apparent reason, the carnival blocks began to grow. In 2014, the number of requests jumped to 169; in 2015, there were 323 blocks; in 2016, 355 registered and 306 effectively paraded. In 2017, 391 paraded;

⁴ SÃO PAULO (City). Decree No. 58,425. Transfers the coordination of the Open Streets Intersectoral Committee and the Open Streets Program Monitoring and Strengthening Committee to the Municipal Sports and Leisure Department and introduces changes to Decree No. 57,086, June 24, 2016. Official Gazette of the Municipality, São Paulo, SP, September 17, 2018.

in 2018, 491 paraded; in 2019, 570 blocks paraded! SMC informs that, for 2020, 865 blocks have registered for 960 parades distributed throughout all neighborhoods. This expressive increase is not the result of public policies; on the contrary, the decrees only reflect the institutional effort to mitigate conflicts and create means of managing cultural and social phenomena.

Decree N°. 54,815 of 2014 regulated the Street Carnival of the City of São Paulo, but it was revoked by Decree N°. 56,690 of 2015, repealed by N°. 57,916 of 2017, and replaced by N°. 58,857 of 2019. The series of municipal decrees regulating the street carnival in the city of São Paulo reveals the effort of municipal administrations to follow the growth and respond to the demands arising from this phenomenon that, year after year, grows consistently, to the point that the city hall announces that in 2020 the carnival of São Paulo was the largest in the country, surpassing that of Salvador.

The performance of artists in the city streets does not only take place on Open Streets or at Carnival; Decree n^o 55.140/2014 regulated the performances of street artists in public places, providing security for artists to work in public spaces without being disturbed or repressed, with no reason.

Discussion

Public open spaces are of fundamental importance in the construction of the public life of society; there is no more inclusive place than the street for meeting all groups that makeup society. In all other open spaces, each group has its very defined roles; in the streets, the meeting allows for debate and tension. The construction of inclusive and democratic spaces involves improving the discussion of the whole society about the role and pacts and values of institutions and the social values themselves.

The contract does not end the struggle of each group; on the contrary, the contract requires the permanent continuation of the battle as a condition for the constant maintenance and improvement of the agreement and for the maturation of the ethics that must govern the relationship between the groups and structures.

It is worth noting how the streets, among all public open spaces, are the privileged place for claiming recognition by all groups. Not only

through the conscious manifestation of the claim but even through the daily practice of its habitus. It is not just the display of banners with slogans but the exercise of practices and activities in public places that allow and recognize their survival and existence.

More than the sign boards, what defines behaviors is the design of spaces, and their configuration. Wide, straight avenues signal that cars can run faster, regardless of license plates. Streets without any bench or place to sit signal that they are no longer places to stay in the view of the municipal administration. When, in 2016, Emurb proposed the placement of new benches on Sete de Abril Str., many merchants complained that they would become a place for the homeless and beggars, or when it proposed a wooden deck and chairs in São Francisco and São Bento squares, there was strong opposition to the projects.

Streets projects are pretty different from other public open spaces. So that these specificities can be articulated and organized, the Theoretical Framework was structured, pointing out the issues and challenges that must be considered when discussing projects and policies for the streets.

Initially, we should understand that the street is the free urban public space that is always, at the same time, a place of stay and walks, access and passage. "Stay" is the simple act of staying in the same spot for some period, which can be short or long, minutes or hours. "Walk" means the circulation of those who do not go to that part of the street; the street is an inhabited path, serving all those who want to walk along it towards their destination or simply for a walk.

"Access" means all buildings and lots with direct access to the space. In principle, the streets will be better with more access and open access for it. Some uses are directly open to the streets, such as shops, bars, bakeries, and other establishments. Many openings are not accessed, such as shop windows and windows that provide animation and visual access for those on the streets. Jane Jacobs points out that the street is better when it has many openings, doors, and windows that "look" at the road.

These four characteristics are essential for all streets; all streets have all four aspects to a greater or lesser degree. The best streets have these balanced characteristics, without any excesses.

The streets that are just access, do not have a passage, are less qual-



Fig.2 - Conceptual Framework, first step - Source: Author 2022.



Fig.3 - Conceptual Framework, second step - Source: Author 2022.

ified, and lose the possibilities and advantages that some movement and encounters can provide. They become less safe, and several maps show that the worst crimes are committed on streets where few people circulate. On the other hand, the streets that are practically only passages with almost no access become real highways, no longer streets.

Adopting the concept of Manuel Delgado, it can be said that we only have a city when we have population density, minimally heterogeneous, constituted essentially by strangers among themselves, integrating spatial mobility and everyday life, without marks or definitive limits.

Following with the questions in the Theoretical Framework, four questions determine the quality of walk and stay, passage and access: modals, speeds, uses, and activities.

Speed is a fundamental aspect when evaluating the quality of mobility, whether accessing or passing through the streets. Due to its characteristics, each street must have limited speeds.

New approaches adopted in this century prioritize the protection of vulnerable road users, pedestrians, and cyclists, holding the State and road design accountable. The safety of vulnerable groups must result from systemic work, including redesigning streets that effectively reduce vehicular speeds and offer safe spaces and paths for pedestrians and cyclists.

As for the modes, it is understood that the more varied the modes of circulation, the greater the guarantees of animation and the more efficient they will be as spaces of mobility.

When "uses" are mentioned, it is about the uses bordering the streets, the functions developed in the buildings, and lots that have direct access through the roads. Although these uses are more stable than the events that take place on the streets, it can be said that there are excellent dynamics with their transformations. Both daily changes result from their opening hours, such as the store's opening hours, the school's entrance and exit, and the hours of bars and nightclubs. Some transformations operate for years, such as the decay or the flowering of streets with commercial and leisure uses.

When we talk about "activities," it is precisely to distinguish what happens in neighboring constructions from what happens in the

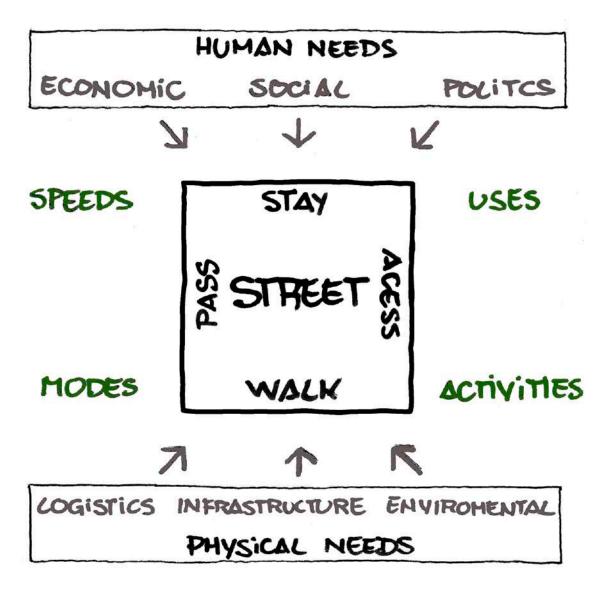


Fig.4 - Conceptual Framework, third step - Source: Author 2022.

streets. Events and activities that occur in roads (lanes or sidewalks), regularly or occasionally, such as street markets, carnival blocks, or street commerce. It is understood that these activities are historically related to the streets, have a significant cultural, social, and economic role, and should be encouraged.

In addition to these aspects (speeds, modes, uses, and activities), the streets are determined by human and physical issues. By human, we mean economic, social, and political issues which affect society and the city in which the street is located. Still, there are issues of the exact nature specific to each street.

Each street has specific social issues, depending on the population that lives or works on it. The commercial and busiest streets in the neighborhoods contribute to opportunities for meeting and creating personal bonds that organize social life and the relationships of leaders and community members.

The political roles of the streets are broad and complex. It is a political act for groups to claim the possibility of expressing their identities in public environments, on the streets. LGBTQI groups are victims of hostility and violence when identified on the roads worldwide.

From a physical point of view, streets are fundamental to the functioning of cities. From a logistical point of view, practically all urban mobility passes through the streets; no transport system works without them. The functioning of cities is only possible thanks to the streets; hence the logistics of the road system are fundamental for all aspects of city functioning.

When I advocate that streets be designed for all forms of mobility, I recognize that contemporary cities need roads for the movement of trucks and heavy loads to connect high-speed roads and even expressways. Traffic engineering and urban transport management are essential for any city.

Infrastructural issues must be considered in all projects and interventions on the streets, as the streets enable water supply, sewage collection, energy, and data supply. They are physical and permanent installations that demand constant maintenance and improvement with updating technologies. Discussions about the management and regulation of these systems are ongoing.

The road fabric is fundamental for the functioning the city's natural

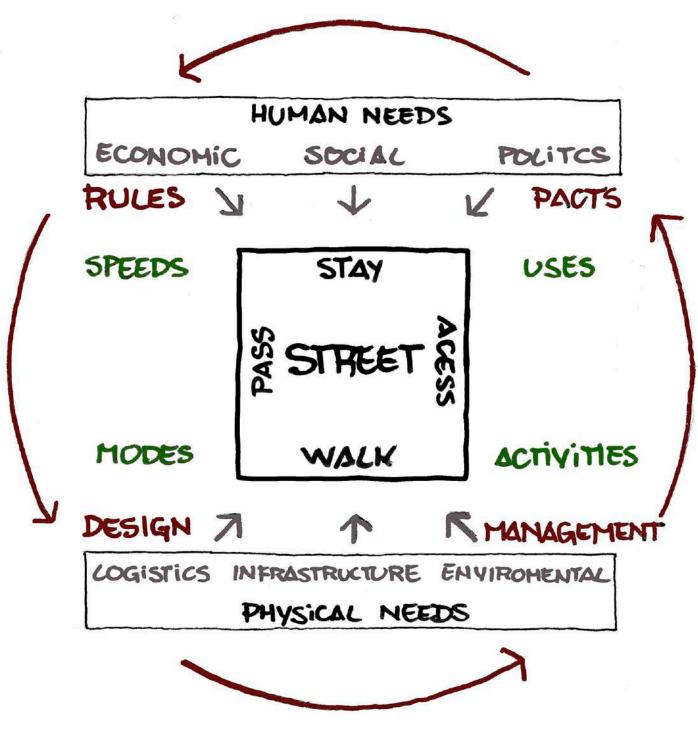


Fig.5 - Conceptual Framework, fourth step - Source: Author 2022.

systems. The streets constitute the most extensive system, distributed throughout the territory in a better-balanced way than any other public service and much better than any other open spaces.

Therefore, the drainage systems and the thermal and environmental balance of the city depend much more on what can be done on the streets than in the city's parks and squares. Street afforestation should be managed more consistently than it is. São Paulo currently has around 650,000 trees planted in the streets, this number should be increased, and the set of trees in the city should be assumed as public heritage that can have multiple uses.

The redesign of the streets must include tree planting and drainage in its concerns, using spaces formerly devoted to vehicles for these uses.

Completing the Theoretical Framework, it is worth mentioning that in addition to human and physical issues, the streets require the construction of pacts; as Louis Kahn (1973) said, "the street is the room of agreement." Agreeing on solutions requires work and discussion strategies that allow different ideas and expectations to be freely and openly exposed and debated. These are not easy, fast, simple, or the same processes for all contexts, but they are necessary and the only means to effectively achieve the objectives. Recognizing the various groups that use the spaces is vital for the success of the processes of debate and agreement, incorporating the multiple groups even when they are not easy to reconcile.

The agreement allows establishing rules and the design of spaces. These definitions are laborious and require time for maturing, elaboration, and debate. The challenge for architects-urbanists is to find solutions by clearly exposing alternatives.

Once these steps have been overcome and the work has been carried out, it must be understood that space management is an inseparable part of the project, especially when dealing with public open spaces. Neither the project nor the rules that guide its use are stable or durable. The spaces given to the city are open to the history of society, to its transformations, which require that the project, the rules, and the agents who agreed to it return to the process, repeatedly, permanently, restarting the cycle.

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The collective work that organizes and makes room for everyday practices, for public life, is the city itself, the materialization of society's pacts—a mirror of difficulties, imperfections, and injustices, a place of poetry, art, and solidarity. The history of the streets tells of this eternal process of dialectical construction of what builds the agents. As Delgado and Bourdieu would say, recognizing the space and the city as a structure, structured that structures urban life; is the best way to understand that the city and its spaces are shaped and shape us daily. Hence, public policies and projects must be clear about which characteristics and virtues should guide these actions.

The historical perspective allows us to observe that the pacts made and redone daily, resulting from negotiations between different social, economic, and political forces, can last longer than built elements and shape the daily life of cities for many decades.

Accommodating environmental, political, and economic demands in the free spaces associated with the road system, readjusting traditional hierarchies was the main effort of Haddad's management. Such changes faced significant resistance and opposition in a city that prioritized automobiles. Candidate for reelection in 2016, Haddad was the first candidate defeated in the first round by the candidate who announced in the campaign to undo everything he had done with the suggestive slogan "Speed up São Paulo." However, after six years, practically none of the primary measures adopted like reducing the maximum speed of vehicles or implementing bus lanes or cycle paths were changed.

It was believed that the works made only with new rules and with the painting of strips on the streets floor could easily be undone. After years, it can be said that management priorities and practices were incorporated and accepted by the population most resistant to them. Artists and street carnivals continue to perform and expand their pres-

ence daily. The participatory processes, provided for by law, continue to mirror the conflicts, but they no longer question the prioritization of pedestrians and public transport over the car and individual transport.

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Elements and typology of community space on the example of European cities

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Abstract

The basis of the paper is the type of traffic space known as shared space, which was introduced by traffic engineer Hans Moderman (late 70s of the 20th century). (Moderman, 2007). Shared space is a type or form of public open space that conceptually combines various types of traffic on a single surface with the exception of rules. (Jayakody et al., 2018)

Although shared space represents a traffic concept, it appears in the space of the city ground floor and cannot be observed unambiguously. In addition to the constituent elements of the city ground floor and traffic flows, activities are also important. We find that all the constituent elements are interdependent.

We have introduced a new term for the type of public open space, which combines different types of traffic flows, activities and elements of the city ground floor in a single area: community space.

The topic of the paper is the presentation of the results of the pilot project of community spaces in 10 European cities.

The aim of the pilot project is to test, on the basis of a small sample of cases, whether it is possible to define the general characteristics of such a space by analyzing the practice of European cities in this field. In selecting cases, we limited ourselves to the countries of the European Community and the United Kingdom. For the needs of the pilot project, we selected 10 examples of cities.

The results of the pilot study showed that the analyzed cases have the following common features: they are located in the city center, connected to public transport stops or lines, have a shops, bars, restaurants and service program, act as connecting links in the wider urban context.

Keywords

urban policies; public management; urban mobility; urban agreements; streets

1 Introduction

The subject of this paper is a research into the characteristics of public space with an integrated traffic in the city ground floor and what is its role in the broader city on examples of European cities. The main idea for researching this particular type of the public open space is coming from the theory of shared space (Moderman, 2007) due to becoming an increasingly popular approach of the traffic organization in European cities during the last several decades. The term and concept of this particular traffic space were introduced by the traffic engineer Hans Moderman in the late 70s of the 20th century with the purpose to assure greater safety in road traffic. He joined different types of traffic flows on a common uniform surface which was not divided among individual traffic lanes, with the traffic space also being absent of all rules, traffic signs, traffic lights and so on. Moderman's point of view is that such organization allows more interaction between users, a thing that is supposed to lead to a greater safety in road traffic and the space itself, respectively. He also advocates the point of view, according to which, such type of traffic organization should be used to prevent traffic jams in the cities. (Hamilon-Baillie, 2008) While reading through literature from the field of public open spaces and other theories from the field of architecture and urbanism we find out that shared space, as a type of traffic organization, does not yet constitute the public open space due to its concept being exclusively limited to relations between different types of traffic flows (pedestrians, cyclists and vehicular traffic). In order to achieve a successful integration of traffic into the city ground floor space, it is necessary to observe relations between all elements and participants that jointly create the open public space.

According to Jacobs (2011) the city is a living ecosystem, with buildings, streets and neighbourhoods. It acting as dynamic organisms that change in accordance with people's needs and their activities etc. He also emphasizes that each element of the city (such as pavements, parks, neighbourhoods, the economy etc.) works jointly with the oth-

ers, much in the same way as the natural ecosystem. Comparing with the latter we can thus understand how public open space works as it is also a living organism. To achieve a quality public space it is therefore mandatory to parallel and jointly observe and understand different factors that co-create the space (such as people, buildings, programmes, urban equipment, directions of movement, traffic flows etc). If we wish to understand how public open space with an integrated traffic works, it is therefore mandatory to understand all of its components that constitute the whole while being mutually dependent on one another, and therefore shall be observed simultaneously. We find out that shared space constitutes the traffic concept that acts as one component within the city ground floor area where, in addition to different traffic flows in a common open space, various so-called built and non-built elements of the city ground floor and activities are to be found.

According to Grant in Gehl:

City ground floor – coexistence of space of the ground floors of the buildings and the physically linked common spaces of the building with a corresponding public space. (Grant B., 2014)

Activities – actions, taking place in an external open space and which are divided into mandatory, optional and social activities. They can also be divided as a compound of the basic types of activities, such as walking, sitting, seeing, hearing or talking. They are then followed by activities such as game, recreation, community activities, as well as expansion of activities from indoor to outdoor (e. g. bar terraces etc.) etc. The basic type of activities thus serves as the prerequisite of development of the secondary ones. (Gehl, 2011).

Only when conducting simultaneous observation and discussing the elements of the city ground floor, activities and traffic flow operation, the type of the public space may be conceived. For this particular type of the public open space we introduced the new term: community space. The term community space thus provides a clearer definition of the type and the form of the public open space, with traffic being integrated into the city ground floor, respectively. For community space is typical to completely summarize the traffic order of the shared space, with no lane splitting being present in the traffic space, while dealing directly in relation to the space and activities which are taking place on the city ground floor. Aside from the key elements, users and activities,

functional and structural integration in the city fabric is also important indicator.

Shared space + city ground floor + activities = community space

Recognition of essential components and elements of the city ground floor and their mutual relations, observed on selected reference examples of community spaces, constitute the main subject of this paper.

2 Research question

If the community space is a type of a public open space which is composed of different elements of the city ground floor, activities and traffic flows, we hereby ask ourselves:

Whether it is possible to recognize and define the common characteristics (such as the form, elements of the city ground floor, programme, traffic flow types, accessibility, narrow and broad city space integration etc.) of the community spaces found in European cities, and what are their mutual relations?

Could we recognize the role of certain community space in the city network of public spaces based on its common characteristics?

3 Research

The research subject is an analysis of reference examples of community spaces. Selected examples of community spaces are limited to a review of the actual state in selected European cities.

Our selection of reference examples is limited to European space, more particularly to the space of the European Union and the United Kingdom, namely due to their common spatial planning strategies / traffic and spatial policies in the last 40 years.

Two criteria played a decisive role in making a further selection of our reference examples. The first one is the restriction which focuses exclusively on the capital cities of particular European Union member states, United Kingdom including. The second one is the selection of exclusively genuine pioneer example of community space in a particular capital city.

We tested adequacy of selected research pattern with a pilot study in which we restricted ourselves to 10 examples of community spaces from European capital cities which are publicly accessible and enough extensively described in general online databases. The number of selected examples in our pilot study constitutes 35,7 % of the complete research pattern (27 EU capital cities and the capital city of the United Kingdom), thus we can legitimately conclude that our method is usable and our findings valid also for the complete research pattern of 28 cities.

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Selected examples of community spaces:
Athens,
Berlin,
Helsinki,
Copenhagen,
Paris,
Rome,
Riga,
Stockholm,
Talin,
Vilnius.
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3.1 Analysis of cases of community spaces

Within selected patterns we observed certain type of public open space – the community space (as in accordance with our definition). In this phase we added another important selection criterion. Observed community space had already been built and in-use so that we can analyse the activities.

In the first part of our analysis we reviewed in which of the 10 selected cities the community space had already been built and in use. We discovered that among 10 reviewed cities only four fulfil such criteria: a built community space which is operable and in use (Athens: Aiolou Street, Copenhagen: Strædet Street, Paris: Rue des Rosiers, Vilnius: Gediminas Avenue).

The remaining cities (Berlin, Helsinki, Rome, Riga, Stockholm and Talin), however, have not yet built the type of a public open space, such as the community space. Currently only some unrealized blueprints exist.

In forthcoming parts of our research we therefore analysed in-depth four examples of the built and in-use community spaces (Athens: Aiolou Street, Copenhagen: Strædet Street, Paris: Rue des Rosiers, Vilnius: Gediminas Avenue).

3.2 In-depth analysis of individual community space examples

A review of the already built and operable community spaces on selected examples of European cities was followed by an in-depth analysis of examples of community spaces. As per the paragraph above (3.1) only four out of 10 selected cities have working examples of community spaces.

The tables show the results of analysis. Each table shows its own community space in a particular city.

While conducting our analysis of community space we observed essential cornerstones and elements that constitute the city ground floor, such as physical characteristics (the length of community space, the width, the height of the buildings, transitivity etc.), activities and city ground floor programme, traffic space, urban equipment, greenery and functional integration with the city as well as functional integration and dependence on narrower and broader traffic network.

Components that were irrelevant for the initial synthesis of findings on identifying the common characteristics were therefore excluded from our analysis due to their closer association with more detailed subjects and topics of decoration and regulation of public open spaces or the city ground floor (such as pavement textures, glass surface reflections, mirrors, fences, etc.).

4 Results

Our selection of reference examples of 10 selected European cities alone offers a finding that the community space, as a type of an open space, could be found in less than half of selected cities (in four). This brings us to a general conclusion that this type of public open space, as the type of a community space, is still in a development phase. Further review of four reference examples leads us to the conclusion that we could gather the reviewed reference examples into two groups with similar characteristics.

That an existing traffic street was transformed into a form of community space is the common trait of reference examples from the cities of Athens – Aiolou Street, Copenhagen – Strædet Street and Paris – Rue des Rosiers (Group 1)

In second group (Group 2) we can find the example of the city of Vilnius - Gediminas Avenue, that clearly shows us the overall arrange-

ment of a public open space into a community space, and which differs from the Athens, Copenhagen and Paris group mainly in organization of traffic flows.

Group 1: Community spaces in the cities of Athens - Aiolou Street, Copenhagen - Strædet Street and Paris - Rue des Rosiers

Community spaces in the cities of Athens – Aiolou Street, Copenhagen – Strædet Street and Paris – Rue des Rosiers have recognizable relatively common characteristics of physical structures and elements, respectively. The community space, both in Athens: Aiolou Street and in Paris: Rue des Rosiers, is less than 100 meters long, while the spatial articulation lane of community space in Copenhagen (Strædet Street) is significantly longer and stretches in the distance of 1.5km.

All three examples have relatively similar street profile width (or rather space between the buildings in a transverse direction) which varies from 5,5 m to 14 m on average.

The height of the buildings and structures is adjusted to human scale (as per Gehl (2010) this is up to the GF+6 height), with the heights of the buildings and structures ranging from GF+2 up to GF+4 (on the case of Athens: Aiolou Street a structure with the height of GF+7 poses an exception).

All three examples have relatively equivalent space rhythm along their longitudinal profile. Individual expansions and constrictions are less common within the profile itself, while the space gets expanded mostly at extreme spots (at the beginning and the end, respectively) of community space where the latter usually runs into a square. An exception to such design is posed by a community space in Paris as it runs on both sides into the space bearing the same width (one branch into pedestrian lane and the other one into street that has its profile split into multiple lanes).

The contact of the interior of buildings with the external open space is rather distinct on the cases of Athens: Aiolou Street and Copenhagen: Strædet Street. The ground floor of the buildings is even with the city ground floor and linked to it through windows, display windows or building entrances.

The facades of all community spaces have an equivalent rhythm where the space mostly binds with the street through larger openings.

The next community space component that we observed were activ-

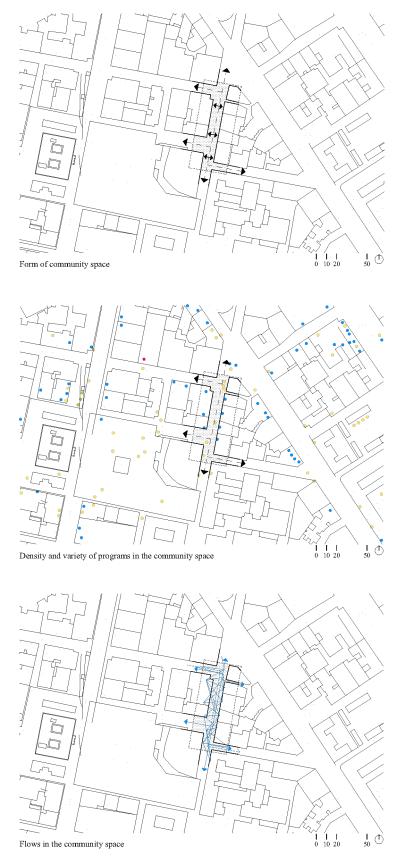


Fig.1 - Athens: street Aiolou - Source: Author 2022

Athens: Aiulou S	treet	
Physical properties	Length	72 m
	Width	11,5 m
	Height of buildings	3—8 floors
	Rhythm changes	In the central part of the Community space, only this is uniform, at the extreme points it expands into the market.
	Contact with public open areas	The ground floors of the buildings are in direct contact with public open spaces. Connecting to shop windows, activities reach outdoors.
	Passability (intersections, underpasses, arcades)	The space is passable in the longitudinal direction, there are no intersections within the arrangement of the community space. The space has non-federal arcades.
	Ecological conditions	Good lighting in the southern part (because the buildings are lower). The space is green. The space is paved, arranged with molds and individual channels for drainage of sainwater.
	Facade features	Space does not have a steady rhythm, it just falls apart and crumbles. Unevenness of heights of buildings, shop windows or other windows, unevenness of arcades.
	Community space endpoints	The Community area extends to the market at the extreme points (both north and south), with both markets accessible only to pedestrians.
	Activities	Traffic flows (pedestrians, cyclists, cars). Traffic flows, seats, etc. take place in the open space. Community space is a place of transition.
s of y loor	Program	Traffic flows and shops.
ements the city ound flo	Density	Medium density of activities or programs.
Elements of the city ground floor	Urban equipment	Benches, lights, trash cans.
H 50	Greens	Trees along the entire community space.
o	Users	Pedestrians, cyclists, cars.
Traffic	Traffic flows	Pedestrians, cyclists, cars.
Tr	Movement, direction	The space is not divided into belts. Cars drive in one direction, other currents in two directions.
Functional inclusion and dependence on the city	Functional inclusion and dependence on the city	Central center.
unctional inclusion and ependenc on the city	City density	High
Fur inc depe	Location in the city	Center.
Functional involvement and dependence on the narrower and wider city network		The Community Space is a link between two pedestrian zones in its northern and southern parts. The common space is parallel to one of the main axes in the city (in the north-south direction).

Fig.2 - Athens: street Aiolou - Source: Author 2022



Fig.3 - Copenhagen: Strædet street - Source: Author 2022

openhagen: St		
Physical properties	Length	1,5 km
	Width	6,5 – 14 m
	Height of buildings	3 – 5 floor
	Rhythm changes	The street profile widens in the area of intersections. At two intersections within the community space, the extension is more pronounced and perceptible.
	Contact with public open areas	Entrances to buildings and passages through buildings are connected to public open areas. Direct contact with public open space is difficult to detect
	Passability (intersections, underpasses, arcades)	5 intersections, 3 underpasses, the space has no arcades.
	Ecological conditions	Lower buildings allow good sun exposure, orientation of the axis of the east-west space.
	Facade features	The facades of the buildings are arranged in the rhythm of windows and doors. The shop windows are getting smaller, the glass doesn't reach the floor.
	Community space endpoints	Community space flows into the squares to the east and west.
. P	Activities	Traffic flows (pedestrians, cyclists, cars), other activities are in the buildings (there are almost no arranged terraces of bars). The Community space does not constitute a retention space.
Elements of the city ground floor	Program	Shops, bars / restaurants predominate, there are fewer offices on the ground floors of buildings; on the floors of the apartment. There is no educational, cultural program or industry in the area of the community space.
ment ity gr floor	Density	The density of programs is considerable.
lem city fl	Urban equipment	Urban equipment within the community area - bike racks, no benches. Ticks appear at extremes at the end of the market.
E	Greens	The trees are at the extreme points of the community space, where it flows into the square. There is no landscaping or landscaping in the longitudinal axis.
n	Users	Pedestrians, cyclists, cars
Traffic	Traffic flows	Pedestrians, cyclists, cars. Traffic flows are static and dynamic (static; bicycle stands, car parking areas).
T. s.	Movement, direction	Pedestrians and cyclists two-way traffic, cars one-way.
nal on nce nce	Functional inclusion and dependence on the	Center.
Functional inclusion and lependence	City density	High.
Functional inclusion and dependence on the city	Location in the city	The community area is located directly next to the main city center.
Functional involvement and dependence on the narrower and wider city network		Community space runs parallel to one of the streets, which is closed to traffic and represents (large representation of the public program, shops).

Fig.4 - Copenhagen: Strædet street - Source: Author 2022



Fig.5 - Paris: street Rue des Rosiers - Source: Author 2022

	Length	54 m
	Width	5,5 – 12 m
	Height of buildings	4 floors
rtie	Rhythm changes	The drythm is steady, in the middle of the extension.
Physical properties	Contact with public open areas	The ground floor of the buildings is connected to the shop windows and entrances to the buildings by open public areas. Activities are not extended to open public space
	Passability (intersections, underpasses, arcades)	The space is passable exclusively in the longitudinal direction. There are no areades or underpasses (passages) through the buildings.
	Ecological conditions	Ventilated space with the longitudinal axis of the space. Tall buildings and narrow intermediate open space do not allow good lighting. The space is green. The space is paved.
	Facade features	A steady thythm consisting of the thythm of shop windows and doors
	Community space endpoints	At the eastern end point, the community space expands into a wider intersection with greenery, and then the space is arranged as a street profile with clearly divided lane (longitudinal parking lanes, carriageways and sidewalks on both sides). At the western edge, it empties into a pedestrian zone (which is closed to traffic).
	Activities	Traffic flows (pedestrians, cyclists, cars). Traffic flows, etc. take place in the external open space. Community space is a place of transition.
s of y loor	Program	Traffic flows, shops, offices, restaurants.
ements the city ound flo	Density	Activity services predominate, the density of the set of programs is high.
Elements of the city ground floor	Urban equipment	Lights, trash cans, flower baskets, pillars.
ш 50	Greens	Trees and plantings in troughs.
5 5	Users	Pedestrians, cyclists, cars.
Traffic space	Traffic flows	Pedestrians, cyclists, cars.
T. s	Movement, direction	The space is not divided into belts. Cars drive in one direction, other currents in two directions.
nnal on ence	Functional inclusion and dependence on the city	Central center.
Functional inclusion and lependence on the city	City density	High.
Functional inclusion and dependence	Location in the city	Center.
Functional involvement and dependence on the narrower and wider city network		In the narrower context, the space acts as a transitional element of traffic flows, connecting the pedestrian zone with a road with separate road lanes on one side. The community area runs parallel (north) to one of the most important road connections within the city.

Fig.6 - Paris: street Rue des Rosiers - Source: Author 2022



Fig.7 - Vilnius: street Gediminas Avenue - Source: Author 2022

Vilnius: Gedimii	nas Avenue Street	
Physical properties	Length	1,5 km
	Width	20 – 22 m
	Height of buildings	3 – 5 floors
	Rhythm changes	The rhythm of space changes. An extension of the external open space (park / square) appears in the community space. At the same time, the space also changes in height (embankments for landscaping, overcoming heights or height differences to separate different types of users).
	Contact with public open areas	The built space has direct contact with public open areas. The interiors of buildings are connected to the public open space either by shop windows, and to a lesser extent by the expansion of outdoor activities.
	Passability (intersections, underpasses, arcades)	The space is well passable in the transverse direction (intersections). The space has no arcades, there are few underpasses through the buildings.
Phy	Ecological conditions	Well-ventilated and well-lit space, shaded by trees. Paving with pavers (partial subsidence of rainwater).
	Facade features	The rhythm of facades full and empty. Larger glazing is in a smaller proportion.
	Community space endpoints	Community space flows into the markets that appear at both extremes. There is a parking lot in the west.
, p	Activities	Traffic flows (pedestrians, cyclists, cars, public transport). Traffic flows take place in the open space, and on individual sections also the terraces of bars, seats, etc. The Community space is a place of restraint and transition.
Elements of the city ground floor	Program	The space has a diverse program: public institutions, offices, shops, restaurants, educational and cultural institutions: there are no parking spaces along the road in the community area.
ment ity gra floor	Density	The density of programs and activities is extremely high.
Elen e cit	Urban equipment	Benches, lanterns, flower beds, boards, pegs, flags, monuments, fences, bicycle stands, bus stop.
the the	Greens	Trees, flower beds, grasses.
	Users	Pedestrians, cyclists, cars, public transport.
ffic ce	Traffic flows	Pedestrians, cyclists, cars. Traffic flows are dominated by dynamic (static: bicycle stands).
Traffic	Movement, direction	The traffic is two way. Public traffic does not run along the space, but only crosses it in a perpendicular direction. There are no bus stops in the area. The space is organized as a combined space. Motor traffic takes place during the day, it is forbidden in the evening. The space is divided into traffic banes, equipped with traffic signs.
Functional inclusion and dependence on the city	Functional inclusion and dependence on the city	Central function.
unctiona inclusion and ependenc on the city	City density	Highest density.
Fur in dep on	Location in the city	Center.
Functional involvement and dependence on the narrower and wider city network		The Community area is the main road. It is connected to the wider and narrower transport network by public transport in its transverse direction. The main traffic aftery connecting the city in a north-south direction (Geležínio Vilko g.) Runs in the underpass under the community space. In the extreme western part, the contact with the reof the city is arranged with parking areas.

Fig.8 - Vilnius: street Gediminas Avenue - Source: Author 2022

ities, having common traits and characteristics on examples of Athens – Aiolou Street, Copenhagen – Strædet Street and Paris – Rue des Rosiers. All examples of community spaces are marked with all types of traffic flows, such as pedestrians, cyclists and vehicular traffic (excluding trams, buses etc., as traffic types). The examples are notable for their high programme density as well as significant diversity. Programmes on the ground floor include bars, restaurants, stores, pharmacies, offices, smaller workshops etc., in addition to apartments on the floors.

The common characteristic of reviewed examples also is that there is no educational, cultural and healthcare programme or industry anywhere on community space area. There are no bus stops either. Programmes and activities are being further expanded into an open public space (bar terraces etc.).

The community spaces are equipped with urban equipment (such as benches, rubbish bins, lights, posts, tree and other greenery troughs etc.).

In all three examples of community spaces all three traffic types are permitted: pedestrians, cyclists and vehicular traffic (with an exception of buses and trams).

Vehicular traffic runs in one way in all three examples, while pedestrians and cyclists move in two-way direction.

Observation of functional integration into the city shows results, according to which all three examples of community spaces are located at a more or less heart of the city, being directly linked to the main city centre and the main traffic road.

High building development and land use density are common for all three examples.

Based on functional integration and dependence on narrower and broader traffic network we can find out that community spaces in Athens: Aiolou Street and in Paris are positioned parallel with one of the main traffic axes, while community space in Copenhagen is parallel with pedestrian lane that is equipped with exceptionally high density of various (namely commercial) programmes.

The example of community space in Athens links the two pedestrian lanes in a longitudinal axis, Copenhagen runs into an expanded square on one side and a T intersection on the other, with community space reaching into pedestrian lane in one section and into a traffic lane-split traditional street on the other side.

Group 2: Community spaces in the cities of Vilnius - Gediminas Avenue

The example of community space in the city of Vilnius – Gediminas Avenue slightly differs itself from preceding examples shown in Group 1 due to its own organization and characteristics.

The length of community space in the city of Vilnius – Gediminas Avenue measures 1.5km, the height of the buildings is adjusted to human scale and ranges from GF+2 to GF+4. Unlike previous examples, street profile is wider and measures 20 - 22 meters.

Space rhythm (space between buildings) changes itself along the longitudinal axis.

Larger surfaces of unoccupied space (such as squares) are being clearly expressed.

The community space has changes of ground level. Certain structures have elevated ground floors, the remaining ones are even with the city ground floor. Changes of ground level could also be found within unoccupied space, where differences in height are possible due to terrain configuration.

The facades have steady rhythm. Larger condensed openings are found in smaller surfaces.

Both branches of community space lead to a square.

Programme, activities and traffic organization of the community space are those particular components that distinguish the Vilnius - Gediminas Avenue example from the remaining three or rather Group 1 examples.

The key difference lies in traffic organization and street profile. The street profile of Gediminas Avenue is split among the lanes for different types of users and traffic flows, respectively (pedestrians, cyclists, vehicular traffic).

However, traffic organization over time is the exact reason why the example of the city of Vilnius could be partly ranked among community spaces: vehicular traffic is prohibited between 7 PM and 4 AM, while pedestrian and cyclist traffic are permitted throughout the day and night.

While permitted, the vehicular traffic is two-way.

On the example of Gediminas Avenue, public transport (bus stations) is also included, however the bus has to cross the community space in a transverse direction.

Programme and activities are therefore another category that separates the community space of Vilnius from the remaining three examples. In the community space of Gediminas Avenue there is an exceptionally high density of various activities. In addition to bars, stores and offices there are educational and cultural programmes.

The community space of Gediminas Avenue is integrated into the central heart of the city. It is located in the part of the city with the high densities of land use and building development.

Functional integrity of community space in narrower and broader traffic network is obvious because the community space represents one of the main traffic connections in the city (going in East-West axis). The main traffic road that goes in North- South direction and crosses the community space, is laid underneath it with an underpass. At extreme spots, the community space runs into a square on the eastern side and then runs towards an expansion with a parking lot on the western side.

Common characteristics of the Groups 1 and 2

Synthesis review and a comparison of all examples bring up the common recognizable elements as important components of community space. They could be identified as the essential cornerstones or the elements of the community space.

The length of community space could stretch in longer city spatial articulation lanes (such as examples of length ranging from 50 m to 1.5 km). However, the quality of direct contact with the city ground floor is better on examples with considerably shorter community space (Paris – Rue des Rosiers and Athens – Aiolou Street). Hereby we can conclude that it is better for the quality of the liveable city ground floor to have shorter but more densely equipped (with various programmes and activities) community spaces.

The size of the buildings in all discussed examples is adjusted to human scale. The height ranges between GF+2 and GF+4.

On examples of community space in the cities of Athens - Aiolou

Street, Copenhagen - Strædet Street and Paris - Rue des Rosiers its width ranges from 5.5 m - 14 m, while the example of Gediminas Avenue (Vilnius) has the community space width of 22 m. Based on analysed activities that are being expanded into the city ground floor and traffic flow characteristics (one way traffic in Athens - Aiolou Street, Copenhagen - Strædet Street and Paris - Rue des Rosiers) in comparison with literature of summarized elements of the community space (as per Gehl and others) we would be required to conduct additional analytical and comparative work of community space examples in order to come up with a suitable direction or recommendation of community space width. Further differences between the results obtained and theoretical starting points can be seen in traffic organization concerning traffic direction. The results obtained have shown one-way traffic direction in community spaces on examples of Aiolou, Strædet and Rue des Rosiers. Numerous authors claim the opposite. They assert that space is being regulated with two-way traffic (Gehl, 2010) is more convenient for development and formation of the community. Introduction of two-way traffic is also more suitable due to ecological factors (greater possibility of route selection, shorter routes; resulting in less noise and exhaust fumes pollution). (Gehl, 2010). Gehl also advocates greater space width due to being the only way of allowing expansion of activities from buildings to outdoors. At the same time adequate widths of external open space allow to receive greater numbers of simultaneously gathered users. The width of external open space is also closely linked to ecological factors of community space (insolation, ventilation, etc.).

According to our finding community spaces are more or less uniform in their longitudinal axis, there are fewer expansions and constrictions. With regards to expansions it is noteworthy that they provide room for additional activities and urban equipment placement.

Community spaces shall be directly linked to the city ground floor. Elevated ground floor prevents direct link, while also erasing the boundary line of direct crossing.

All of the above examples share a transition into expanded external open space (such as squares).

They also share a steady rhythm of the facades. Ground floors of the buildings are connected with external open space through the glass surfaces and display windows.

Activities in community space are both, primary and basic (walking, sitting, seeing, hearing, talking etc.) and secondary (game, recreation, community activities etc.). (Gehl, 2010). The users (pedestrians, cyclists, motor vehicle drivers) can either traverse the space, hang around or sit. Apart from the basic and primary activities that cause various interactions. Users also resort to programmes that are being expanded from the buildings to outdoors. They occupy terrace tables, use bicycle stands, look at display windows etc. Among the activities it is not possible to identify playground equipment for children or any other recreational elements (such as open gym etc.).

Due to the common profile / surface-based traffic organization and integration of various users and activities of predictable nature (whose events flow could be estimated by observation and mutual interaction) are being introduced to community space. Predictability of activities is of essential meaning to assure security in the area as well as equivalent use and integration.

It is possible to acknowledge the trait of the programmes in community spaces.

The community spaces are represented with high density of various programmes the city ground floor.

Present are programmes such as bars, restaurants, shops, offices and smaller workshops. There is no industry. The educational and cultural institutions are exceptions make the rules. The latter brings us to conclusion that selection of all-day operating programmes is essential for development of community space.

A selection of programmes is also important for design and concept quality of community space.

The programmes shall be selected in a way so their operation results in as even user occurrence within the space as possible. The latter means that when creating blueprints of programmes in community space we have to avoid the programmes that may cause sudden concentration of users in space and, consequently, the sudden decline (such as educational institutions, cinemas etc; in situations where, before or after certain events take place, a large crowd of users, who then suddenly leave the area, gathers at the building entrance). Programmes shall therefore be used to create steady fluctuations of users within the space and then hold them up as continuously as possible.

Community spaces are therefore not occupied with contents, pro-

grammes and activities that operate within certain parts of day only. Programmes that cause extremely huge fluctuations in the number of users are also not suitable for creation of community space.

On example of Vilnius' Gediminas Avenue, we can find out that there is a link between a programme selection / activities and traffic organization. Vehicular traffic and division among the traffic lanes are permitted in the community space of Vilnius' Gediminas Avenue during daytime, however, vehicular traffic is prohibited during evening hours and night-time, with division among traffic lanes also getting blurred during that time

In addition to bars, stores and service activities, the community space also offers cultural and educational institutions. Both cultural and educational institutions do not operate all-day, instead they are usually in operation during day / morning time, causing extreme fluctuations in the number of users (e. g. the beginning of performances and classes etc.). In the evening and at night such institutions remain closed. Fluctuation of users becomes stalled and it's exactly during that time that changes in the organization of community space operation start to emerge. The latter therefore substantiates the fact that selection of programmes and traffic flow organization are directly linked.

In all of the examples of community spaces all types of users, such as pedestrians, cyclists and vehicular traffic, could be found. The latter being absent of bus and tram traffic. An example of the community space in Vilnius poses an exception due to the bus traffic crossing into community space in a transverse direction. In order to define suitable directions and findings regarding the traffic flow types and their combinations, our research should have been further upgraded with additional examples of community spaces, a thing that would have clearly shown directions with regards to selection of traffic flow types and their mutual combinations or dependences.

All of the examples of community space share functional integrity and connection with the city fabric as well as functional integrity and connection with narrower and wider traffic network. All reviewed community space examples are located at the very heart of the city where the building development densities and land use are at their highest. At the same time all community space examples run in parallel with important programme or main traffic axes.

5 Conclusion

Our comparative analysis of community spaces in Aiolou (Athens), Strædet (Copenhagen), Rue des Rosiers (Paris) and Gediminas Avenue (Vilnius) clearly shows the concepts and findings on what is the community space. The community space therefore represents a type and a form of the public open space, respectively, where various user types are joined on a unified surface and between whom there is a conscious or unconscious interaction, with various activities taking place in the city ground floor area. It is important for programmes located in the interior of the buildings to connect into an external open space and vice-versa, as a form of activity.

The community space therefore means connectivity and simultaneous operation of various activities in the common joined space of the city ground floor with an integrated traffic on a common uniform and undivided surface.

We hereby recognize that links between the common characteristics of the community space do exist.

The latter could be divided among the primary or basic elements that define the community space, and secondary, which bear no essential meaning for its existence.

For emergence and development of community space, primary activities, functional integration and connection with the city fabric as well as functional integrity and connection with narrower and wider road network are of the utmost importance. The above elements have suitable or rather the main influence when creating a community space concept, while design elements (urban equipment placement, facade rhythm, direct contact with the public space with an elevated ground floor, physical characteristics, such as length, width etc.) are less important and of secondary meaning and emerge as consequences of successful primary elements.

While making a concept or design of community space it is therefore important to observe relations between individual elements that compose the community space.

As per Cullen (1996) it is exactly relations between the elements that create the environment: buildings, trees, nature, traffic flows, etc.

For the concept of the community space, a selection of key programmes and activities that function during the whole day, operate

steadily and could be estimated, plays an important role.

An important research result is the finding of role of community space in relation to the open public space network. The community space, in relation to the public space network, acts as the backing or supplying public space, that runs in parallel with the main programme or traffic axes and is supplying them (either through programmes or connectivity etc.).

A relation of community space to the network of public open space (as well as the city) and representation of higher programme densities (such as smaller workshops, services, bars and restaurants etc.) evidently shows that the form of a public open space, such as the community space, also conforms to the principles of a 15-minute city. With an appropriate integration of traffic flows into the space of the city ground floor, it allows for a quality and adequate connectivity, accessibility and fluidity (people, goods, information, etc.). As per Carlos (2019), 15-minute cities stand for convergence of various programmes to the residents, for whom high densities are typical and the selection of various contents accessible within the time span of up to 15 minutes.

By expanding our research (greater pattern selection) it would become possible for all of the components that jointly form the community space (primary and secondary elements of the city ground floor, activities and traffic flows) to become subjects of a more in-depth observation, in addition to their mutual relations and the relation of or rather the role of the community space in wider and narrower city context (such as the relation to the public open space, city part function, traffic network, programme etc.). The latter would represent the basis for defining criteria and directions of quality mutual combinations of elements that will create a lively, safe and accessible to everyone community space.

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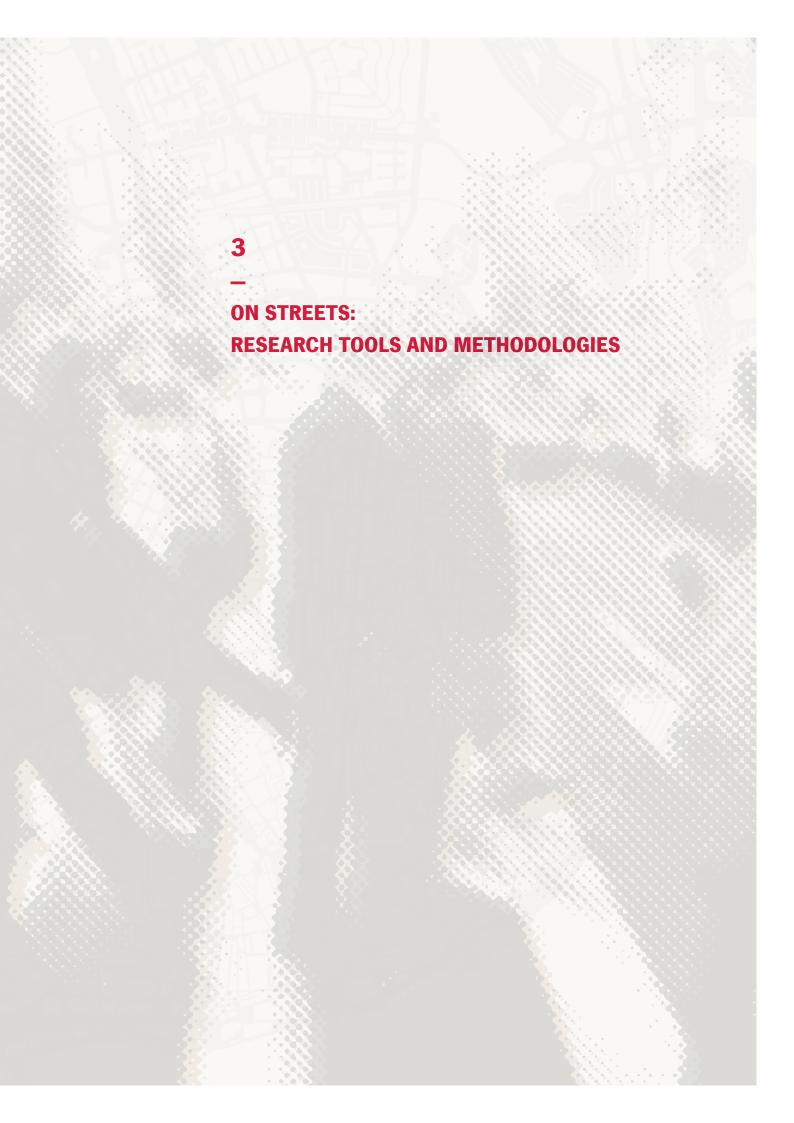
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Cartography of Urban Scenic Spaces in Valparaíso

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Abstract

The cartography considers the geomorphological qualities of the city of Valparaíso as a propitious space for the generation of scenic and cultural acts in the public space. Valparaíso is a great theater overlooking the sea, this is a first quality to think about its condition of "Theater City". The city has other elements of this nature that it is necessary to identify, analyze and catalog corresponding to its geographical condition. For example, the ravines, squares, passages, viewpoints, among others.

From an architectural point of view, cartography promotes a morphological analysis that seeks to capture the architecture of the place as scenography, that is, to be able to determine the spatial qualities of public spaces that allow them to be configured as scenic spaces.

And from a sociocultural point of view, mapping relates one of the edges of the intangible cultural heritage of a community, reflected in the performing arts, and the urban fabric, making this relationship an integral part of the exploration of urban space as a communicative platform of a city.

Artistic and cultural acts, as urban and public representation, keep a society alive. It is the center, place and reason for a community to meet, share and exchange its customs; collaborating in transforming and sustaining a "Heritage City" as a living fact with historical, social and cultural strength.

Keywords

Architecture, city, theater, cartography, scenic space

Scales to listen and see potential scenic spaces in the city

To conduct a study that explores the knowledge, cartographic representation and visual dissemination of public spaces that are suitable for performing arts and cultural activities in the city, is the main goal of the research, framed in the FONDART project, Call 2021, Transitional Emergency Fund, of the Ministry of Cultures, Arts and Heritage: "Cartography of Urban Scenic Spaces of Valparaiso: Digital catalog of public spaces that are suitable for performing arts and cultural activities in the city".

The research hypothesis considers the geomorphological qualities of the city of Valparaíso as a space conducive to the generation of scenic and cultural acts in public space, seeking their identification, registration and analysis for the conformation of a corpus, in the form of a digital catalog, of urban scenic spaces in the city.

The resulting digital catalog is displayed in different scales that consider territorial, urban, architectural and social dimensions of the potential scenic spaces.

At the territorial scale, the cartography draws a map that contributes with the visibility of a system of urban scenic spaces in the city, which allows interpreting the relationship between this urban fabric and the city. At the urban scale, the cartography presents information on the physical environment of the area of direct influence where each urban scenic space is located, its spatial configuration and the built environment, which allows for a characterization of the neighborhood in terms of public spaces, services, infrastructure, among others. At the architectural scale, the cartography provides a set of cards with the spatial morphological analysis that allows the public spaces to be cataloged as urban scenic spaces. And on the more social scale, the mapping allows us to enter into two dimensions; the first is linked to the knowledge of community assets such as neighborhood relations, the degree of organization and participation in community actions and artistic, scenic and cultural events of the population living adjacent to the urban scenic spaces. And on the other hand, the mapping seeks to be a tool for performing artists and cultural managers, allowing them to identify the public space suitable for the manifestation of performing and cultural street actions.

In short, the project develops the design, at the preliminary project

level, of a digital platform containing an interactive cartography, which operates as an information and documentation system that addresses the relationship of street performing arts with the city and architecture, being able to become, at a later stage of development, a tool for managing the use of public space for performing arts and local culture.

In order to carry out this study, bibliographic and field research was used to generate a database that would allow drawing the general cartography, the polygons of influence and the configuration of the data sheets of the urban scenic spaces; all of this complemented with the respective graphic material of each site.

The background of this research is based on the argument of the doctoral thesis of the main researcher, regarding the trajectory that the scenic space has had throughout western history, evidencing that there is an architectural vision that has incorporated principles of the theatrical scene and its link with the uses and human acts in the construction of life in society, in its spatial expression, in the architectural and urban context.

On the other hand, useful references are found in research from the field of theater history and urban history, in which the contribution of the work of the Observatory of Scenic Spaces and the development of the theater atlas of Spain¹ and other European cities, referring to theater infrastructure, whether theaters or recycled buildings for stage activity, stand out; and the MIRE Project² of the SGAE Foundation, which is constituted as a digital map that locates a cadastre of theaters in Spain together with their technical information and a glossary of terms regarding stage equipment and theater architecture itself.

The concept of "Theater City"

As old as the city itself, the theater, from its origin in the dithyramb, located and executed in the outskirts of the city, in the forest and for

¹ Research project "Theatrical Cartography: Spain" (BIA 2016–77262-R). https://www.espaciosescenicos.org/es/proyecto-de-investigacion/cartografia-teatral-espana-bia-2016-77262-r/5

² Computerized Map of Scenic Venues. https://www.proyectomire.org/web/mireinicio.php

several days; until the use of vacant places of the present city, has not ceased to warn of the events that move the world as well as to require the space that the world builds; a clearing in the forest, an esplanade, the slope of a hill, a closed enclosure in the middle of the city, the streets, squares or the neighborhood, in short, the entire city.

Today we can witness that there are cities that can be named as Theater Cities; Venice, Barcelona, Paris, Avignon, Spoleto, in Europe and to name a few; Buenos Aires, Rio de Janeiro, Ouro Preto, Salvador Bahia, Valparaiso, in South America, to name others. This, from the following dimensions that are manifested in each one of them; the capacity to be seen, the theatron, as that place from where a theatrical scene can be seen, the theatrical whole where scene, actor and spectator converge (Fig.1). A capacity to gather and move those who visit it for something that responds to its intimacy. A city with intangible patrimonial value testifies to this, although the destiny and/or objective of some, or perhaps many cities, is still unclear.

In this sense, it is important to mention the capacity of public space in those cities to attract people. Gehl states that human activity is the main incentive for the intensive use of public space. He also indicates that the configuration of a space influences the life that takes place in it and, therefore, the intensity of its use, "(...) architects and urban planners can influence the possibilities of meeting, seeing and hearing people (...)"³

Throughout history, the participation of architects in the work of the scenic space has had fundamental repercussions for the development of the performing arts. Likewise, we can affirm that the scenic space has contributed to the transformation of the urban structure of the city and to sustaining the intangible value that many cities sustain as the heritage of their identity.

The re-presentation

Walking through the old city of Barcelona, what is understood by the gothic quarter near the cathedral, permanently full of people walking

³ Jan Gehl. Life between buildings: using public space. Copenhague, Dinamarca: Danish Architectural Press, 1971.



Fig.1 - An opera singer sings in a small street, people next to the Barcelona Cathedral, mainly tourists stop and surround him, the sound of singing occupies the whole space, the space conducive to singing, the condition of seeing and hearing - Source: Author 2006)



Fig.2 In the Rambla of Barcelona some actors are located occupying the edges of this esplanade. The esplanade, people stop for a moment to see a man with his head on a table where there is a sign with his head on a table where there is a sign that says "menu of the day". The passer-by is curious about this motionless act, where he recognizes himself but finds the act strange. The act seems strange to him - Source: Author 2006)

and crossing it, on one of its sides, a man sits headless, next to him a table and on it, a tray holds the head apparently of the same man. The act is almost motionless, there is nothing that moves but the head and hands of the character, the passers-by who attend to see this act and who gather forming a circle around it, stop for a single moment, surprised and laughing, take a few pictures and continue, what happens in the act is that the surprise of the passers-by is manifested because what happens there could not happen in the reality that belongs to them (Fig.2).

According to theater director Peter Brook, this scene could be all it takes to make a theatrical act.

(...) I can take any empty space and call it a bare stage. A man walks through this empty space while another man watches him and this is all I need to perform a theatrical act.⁴

It is concretely the fiction that takes place in the scenic space, that is to say what is not true or does not belong to reality, outside of it, although it is plausible, to which the observer–spectator attends only to be physically before it and not inside it. This, we can establish, is a radical difference with the architectural space, the latter is configured through the limits given by the form, and that gives us the human being the possibility of being in front of the work and within it since its reality is plausible and true at the same time. The theater is pure fiction and although the threshold at times seems not to exist. However, its reality is located outside the daily events of the human being.

The theatron

The condition of the theater comes from the word *theatron* which means place from where one sees. The meaning of the word denotes a position but for the theater it would be within an assigned place, which implies that outside of it one is no longer in the position to see. It is the place from where the spectator is in a position to see and from which he has to contemplate what is in front of his eyes. Thus this character attends an act to see that which he is guaranteed to see, so that his

⁴ Peter Brook. El Espacio Vacío. Barcelona, España: Península, 2002.

position has margins that go both in the direction of the scene and also in the opposite direction of the scene.

In this sense, and taking as a reference what the historian Johan Huizinga specifies with respect to the game, the theater as a form of game has to develop in a time and a context extraordinary to the ordinary life of the human being, within visible or imaginary limits that are delimited beforehand by those who have to play or represent this act.⁵ Thus, the idea of this other place originates from the fact that there is a visible or imaginary limit between the represented act and the observer who contemplates this act.

In a metaphorical sense, it is the tragedy of the architect not to belong to any of these natures, that of the actor, the spectator, or the place, a sort of anti-theater as Josep Muntañola says of what architecture is, because in his words, the architect has to place himself in the place of the other, when neither the other, nor the place, nor the spectator see you.⁶

In theater the place is the scene and more specifically the scenography, which contains the scene or scenes, this word comes from the Greek, *skene* and *skenographia*, which has two meanings, this and another that comes from *skiagraphia*. *Skene* means hut, shed, building first of wood, rustic. *Skiagraphia* on the other hand means backdrop painted from light and shadow. In the scenic space the place is a universe that emerges from the plot of the play, nothing is left over and all the elements that are arranged in it have a reason for being, they mean something for the play and are articulated in their appearance within it, according to the order determined by the light in the case of belonging to a closed theater, being the light that makes the place appear or as the depth that is reconstructed in the perspective. In this sense, in theater, the idea of place and non-place is very precise and the spectator attends to this appearance.

Valparaíso, "Theater City"

Valparaíso is a city that can see itself as a total, as a great open

⁵ Johan Huizinga. Homo Ludens. Madrid, España: Alianza, 1972.

⁶ Josep Muntañola. *Topogénesis. Fundamentos de una nueva arquitectura*. Barcelona, España: UPC, 2000.

theater; from different points it is possible to recognize the city as a whole, considering that in each promontory of the 50 hills of the city that are distributed in horseshoe form, there is a viewpoint, however precarious it may be. When it is erroneously said that Valparaíso is a great amphitheater overlooking the sea, since it is recognized by amphitheater the bad habit of calling this way to the theaters outdoors, it could be thought, that this error, rooted in the porteña culture, is due to its configuration in horseshoe form, like a great Greek theater that looks at its extension of sea from all its fronts. It would be correct to say that Valparaíso is a good example of a "Theater City" due to its geographic and urban qualities. An example of this is that once a year, the whole city turns to face the sea, witnessing the spectacle of the fireworks. The city has the ability to see and be seen, who can climb a hill and go through it to meet from time to time with a new city but always with the constant presence of the sea, a sea that is presented in fragments of roadstead. The Greeks would have liked to have had a city like this one, always converging to meet its own destiny -which in the case of the "Porteños" is the sea, their not so peaceful ocean.

But Valparaíso has other elements of this nature that need to be consolidated corresponding to its geomorphological condition. For example, the ravines, squares, passages, viewpoints, among others. It is in these public spaces where communities establish relationships of coexistence based on daily rituals, from the feeling and appropriation of space, where a constant staging occurs that reinterprets the urban space from different locations. For example, a group of children, all neighbors, play ball in a passage of the Santo Domingo hill, this form of grouping, we could say connatural to the neighborhood, is generating a space of play and re-presentation in the sense that it is performed routinely and by it appears a dimension of neighborhood in this place (Fig.3). Valparaíso, through its hills, forms a new network of neighborhoods, each one with its own elements and identity. And because of this, in 2003, part of its historic area was recognized as a World Heritage Site by UNESCO, for its qualities of intangible heritage linked mainly to the social reality that gives life to it.

And in this, we will understand the concept of "Theater City" as a form of representation of urban and public life that makes a society remain in force. Where the theater, or directly the urban scenic space is

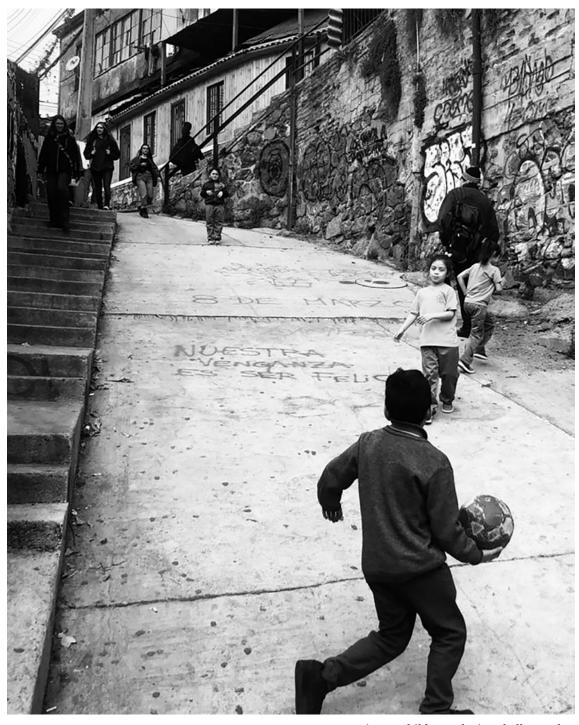


Fig.3 Children playing ball on the slope of a street - Source: Author 2019

center, place and reason for a community to meet, share and exchange their customs, a place of convergence of living culture and form of exchange between one social group and another; collaborating in transforming and sustaining a "Heritage City" as a living fact with historical, social and cultural strength.

Cartography of urban scenic spaces of Valparaíso

Based on what has already been described, this study aims to build an updated diagnosis in relation to the use of public space from the perspective of the performing arts, highlighting its spatial and technical components that give it form and function.

And from a sociocultural point of view, the mapping relates one of the edges of the intangible cultural heritage of a community, reflected in the performing arts, and the urban fabric, making this relationship an integral part of the exploration of urban space as a communicative platform of a city.

Identification of urban scenic spaces on a territorial scale

In the first instance, the organization of ten work groups is configured, formed by two or three students, within an architecture workshop of the Disciplinary Cycle, which corresponds to the third and fourth year of the career, of the School of Architecture and Design PUCV, which is directed by the authors, who from a first stage of study and bibliographic review in relation to the concept of "Theater City" to give a frame of reference to the search for public spaces with scenic potential, are assigned sectors covering hills from west to east of the city of Valparaiso, and from the coastal edge to the hundredth elevation of the hill, which is constituted in the Avenida Alemania.

The methodology used is mainly based on architectural observation and field recording, passing through a fundamental practice that we call "processional tours". The roots of this tool to produce knowledge from the experience of walking must be located in the field of art, from the Dadaist visits–excursions in the twenties, through the theory of the Situationist drift since the fifties or the suburban journeys and odysseys around the land art in the sixties.

⁷ Francesco Careri. Walkscapes. El andar como práctica estética. Barcelona: Gustavo Gili, 2013.



Fig.4 - The theatrical capacity of small public spaces is evident. The Festival of the Arts or the Danzalborde festival are some of the events that use normally unnoticed spaces as a stage for performances - Source: Author 2018)

(...) a way of capturing the act of crossing [the territories] without regulation, certification or definition of the object of knowledge, so that this does not impede becoming. Crossing is for Stalker a creative act, which means the creation of a system of relations in the chaotic juxtaposition of time and space that characterizes the Current Territories. To cross means to recompose in a single cognitive path the strident contradictions that give life to these places, in search of unusual harmonies.⁸

As a methodological tool, this cartographic tour provides several advantages; it allows understanding the territory not as a fixed form, but as a process, i.e. processional, integrating the dynamics of the social actors present and showing the complexity and diversity that characterizes it, in a way, it opens to citizen participation and the valuation of the territory by the nearby inhabitants and by the users of the space, showing a great potential to discuss the representations and destinations of the territory (Fig.4).

The recording of the tours is carried out through architectural observation, which in this case, we will understand as a sketch technique, that is, drawings and annotations that seek to identify the tangible and intangible values that underlie each place and a general photographic record respectively.

As a result of this stage, 43 sites are identified (Fig. 5), which are preliminarily exposed to a group of representatives of the community of street performing artists of Valparaíso and the Directorate of Cultural Development of the municipality, and also taking as reference the information about the 16 sectors of Valparaíso most used by the artistic community, identified by the Urban Inspectorate Department of the Municipality of Valparaíso, it is jointly determined that the research will address in depth the study of eight public spaces, corresponding to:

Plaza Esmeralda, Cerro Monjas

Estación superior Ascensor Bellavista, Cerro Bellavista

⁸ Stalker. «Stalker thought the actual territories», 1996, http://digilander.libero.it/stalkerlab/tarkowsky/manifesto/manifesting.htm (traducción libre del inglés).

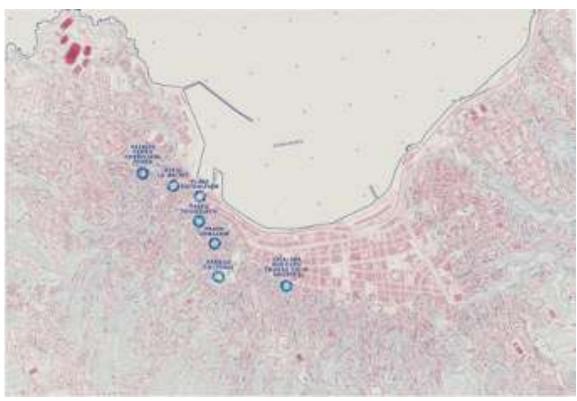


Fig.5 Base mapping - Source: Author 2018

Plaza Aníbal Pinto, Plan
Plaza Bismark, Cerro Cárcel
Paseo Dimalow, Cerro Alegre
Plaza Joaquín Edwards Bello, Cerro Alegre
Paseo 21 de Mayo, Cerro Artillería
Plaza Waddington, Cerro Playa Ancha

Preliminary characterization of urban scenic spaces on an urban and sociocultural scale

After the first period of inquiry in the city, the information collected is systematized through the drawing of a base cartography where the location of each site recorded and the creation of a database, which allows the configuration of a technical sheet, which has some fields that point to the development of a neighborhood information survey for the eight cases, i.e. the definition of a polygon of direct influence of the defined public spaces, both in an urban and sociocultural dimension. For this purpose, we have relied on the following components:

- Physical-spatial dimension, refers to the physical environment of the neighborhood, its spatial configuration and the built environment, which allow us to arrive at a characterization of the neighborhood, in terms of public spaces, services, infrastructure, among others.
- Social-cultural dimension refers to community assets such as neighborhood relations, participation in community and cultural activities, degrees of organization, demographic and socioeconomic indicators.
- 3. Regulatory dimension. linked to the definitions that regulate the uses of the studied areas, reviewing their validity.
- 4. Life cycle and SWOT analysis, from which are complemented, dimensions that seek to determine the validity or obsolescence of the neighborhood and the weaknesses and opportunities, elements that must be crossed to find the implicit value of the place, its first, second and third destinations.

Together with the application of the technical sheet, oral interviews are conducted with members of the local community who reside within the defined polygons of influence, complementing the information for the characterization of the respective neighborhoods.



Fig.6 Cartography in MyMaps platform - Source: Author 2021

Analysis of urban scenic spaces on an architectural scale

The information collected is worked on the basis of the MyMaps platform, where the 43 sites preliminarily identified are located (Fig.6), defining five categories according to the typology of space, being in this case; plaza, viewpoint, passageway, stairway and ravine. A color code allows differentiating and distinguishing each classification. Each urban scenic space is accompanied by a brief description of its spatial morphology and a set of photographs.

In this phase, dialogues are held with street performing artists and cultural managers in relation to technical dimensions of the space, which are fundamental to take into account for the development of street performing arts. In order to incorporate in the data base of the technical data sheets for the eight defined cases, the parameters that allow describing in greater detail the spatial morphological aspects of each site. Defining the following components: surface area, estimated spectator capacity, orientation, luminosity, acoustic potential, affluence and types of use.

In addition, graphic material is developed for each of the eight sites, through the creation of planimetry that considers the general architectural plan (Fig.7), sunlight schemes and a 3D model (Fig.8); and a 360° photographic record (Fig.9).

Conclusions

This collective research between students, actors of the territory and the authors, has made it possible to generate new background information, to deepen in elements already investigated so far, and to have a collection of relevant photographic, planimetric and audiovisual material. The format has generated interest on the part of all those involved and local authorities.⁹

Apart from contributing to the cartographic, planimetric and diffu-

In Valparaíso, the first Municipal Ordinance on Street Arts has recently been approved at the national level, and therefore, the collected material is empowered as a tool that could support plans for the management of public spaces and the definition of cultural policies in relation to public spaces. The interactive mapping project thus becomes a long-term strategic project, which could even result in a joint application for external funds for its professionalization.



Fig.7 Plan of Rudolph's stair - Source: Author 2021

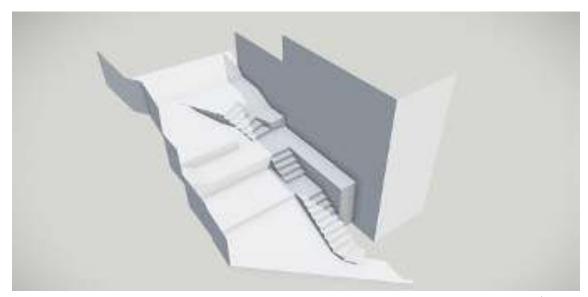


Fig.8 3D Model view of Rudolph's stair - Source: Author 2021



Fig.9 360° register of Rudolph's stair - Source: Author 2022

sion register of public spaces with scenic potentialities of the city of Valparaiso and its actors, the project proposes a critical reflection on the management and use of public space. We conceive this territorial network that emerges from the visualization of cartography as an important capital in which the power of a new urban beginning is glimpsed: the possibility of transforming, re-appropriating and reinventing informal spaces of the city as urban scenic spaces in which a rich interrelationship is established between the inhabitants and their environments.

Through the interviews, dialogues with artists and the experience of performing street theater actions, it can be seen that the performing arts break with the everyday life of the cities and question the street, to catch the passerby and give him/her a new way of inhabiting the city, mediated by a collective experience. Thus, by making possible the experience of inhabiting the city in connection with others, it generates an experience of construction of shared meaning, an experience of collective resignification of the places they intervene. In other words, the performing arts in public spaces transform places into spaces, because they turn the corners of the city into practiced places, spaces that are filled with the practice of the arts and shared experiences of resignification.

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Form-less Street? Case of Housing Estate

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Abstract

Modernist planners killed the street - long live the street. The paper investigates the street spaces to be found in the typology of housing estates, attempting at rethinking how those could be defined and evaluated. It reflects on how disciplinary and conceptual divide of 'road vs. street' approach could impact our understanding of such street spaces, which by their nature defy such strict categorization expressively combining features of both, especially in terms of urban form. Respectively, the paper argues for more extended articulation of the role urban form is playing in composition and performance of street spaces in the housing estate, suggesting a way to approach such articulation. It suggests an evaluation tool designed as a 3D matrix to assess street spaces by 'Link', 'Place' and 'Form' criteria. Specific sets of criteria are developed for each of 3 categories tailored to capture the specific conditions of the typology of housing estates as regards street spaces. Thus, 'Link' is designed to evaluate transit function ('road'), wherein 'Place' and 'Form' categories are operationalized using the compositional model of place borrowed from place-based GIS. The tool is tested on 3 sites located in Marzahn housing estate, Berlin, Germany, results of which are presented. It is argued that the framework offered by Link Place Form Matrix could be useful to approach the hybrid spaces being formed around the streets within housing estates, offsetting certain challenges tackled by the present study.

Keywords

street, urban form, place, housing estate

Generative role of the street for the city (along with other elements of urban form) is recognized and widely studied across scales and diverse

¹ Lillebye, Einar. "Architectural and functional relationships in street planning: an historical view." *Landscape and Urban Planning* 35, no.

impacts it has over the urban form. Generative role of the street for the city (along with other elements of urban form) is recognized and widely studied across disciplines (from transportation², civil engineering³, to urban design⁴, sociology⁵, among others), scales (from citywide street networks analysis⁶ to studies of particular street segments and individual perceptions⁷), and methods. Inter alia, research attention is devoted to the form of the street, from general urban morphology agenda to specific studies of attributes of street form⁸. Such multifaceted-ness of the street entails certain conceptual heterogeneity in underlying approaches, definitions, (explicit and implicit) meanings and connotations.

Navigating such heterogeneity, two major underlying approaches could be distinguished, which might be concisely named 'street vs road'. Such division would broadly reflect the disciplinary divide between urban planning and design on the one hand as opposed to engineering and transport planning on the other hand. Accortdingly, the street might be defined from two perspectives: "(1) Transport – an urban road with built frontages or buildings associated or (2) urban design – an urban space or place used for public access and passage"10. This is not a strict dichotomy, but rather a continuous field allowing for gradation, various combinations of both. However oversimplified, it

2-3 (1996): 85-105.

² Teodorovic, Dusan, ed. Routledge handbook of transportation. Routledge, 2015.

³ Lay, Maxwell G. Handbook of road technology. CRC Press, 2009.

⁴ Moughtin, Cliff. Urban design: street and square. Routledge, 2007.

⁵ Mehta, Vikas. The street: A quintessential social public space. Routledge, 2013.

⁶ Porta, Sergio, Vito Latora, and P. Crucitti. "The network analysis of urban streets: a primal approach." In Environment and planning, pp. 247-276. SAGE Publications Ltd, 2012.

⁷ Ewing, Reid, Amir Hajrasouliha, Kathryn M. Neckerman, Marnie Purciel-Hill, and William Greene. "Streetscape features related to pedestrian activity." Journal of Planning Education and Research 36, no. 1 (2016): 5–15.

⁸ Oreskovic, Nicolas M., Pablina Roth Suzanne Lanyi Charles, Dido Tsigaridi Kathrine Shepherd, Kerrie P. Nelson, and Moshe Bar. "Attributes of form in the built environment that influence perceived walkability." Journal of architectural and planning research 31, no. 3 (2014): 218.

⁹ Hebbert, Michael. "Engineering, urbanism and the struggle for street design." Journal of urban design 10, no. 1 (2005): 39-59.

Marshall, Stephen. Streets and patterns. Routledge, 2004.

still allows illustrating a fundamental difference between technical transport planning approach ('road'), focused on predominantly caroriented transit as the main functional imperative of spaces for movement within the city, and urban design approach ('street'), encompassing a wider functionality of such spaces, first and foremost those of public space, as well as more willingly incorporating human-centered considerations and social aspects¹¹.

Street in Housing Estate

The above definitions contain considerations of urban form, referring to either 'built frontages or buildings associated', and performed functions, i.e. 'access and passage'. If applied, those features should indicate that a certain area could be considered 'the street'. However, if to test those on a particular typology with a very distinct spatial composition, including organization of movement flows, namely, on a postwar large housing estate¹ (referred to as 'housing estate¹ further on), one might expect to run into a number of difficulties.

The housing estate incorporates key principles of the modernist planning paradigm, in particular, top-down large scale planning, separation of functions, car-oriented transit, and in many respects it also follows imperatives of prefabricated construction technologies¹³. Illegibility of spatial arrangements and their morphological independence from a road network, perceived lack of directions in internal organization of movement, spatially intricate solutions with level-segregated pedestrian-traffic systems are listed among its characteristics. Within such arrangements common building types (e.g. towers and slabs), as positioned in relation to transit zones, create street spaces distinct from traditional ones¹⁴. Accordingly, if to apply the above definitions

¹¹ Ibid

Wassenberg, Frank. Large housing estates: ideas, rise, fall and recovery: The Bijlmermeer and Beyond. Vol. 48. los Press, 2013.

Andersson, Roger, Polina Bogacheva, Gideon Bolt, Åsa Bråmå, Liviu Chelcea, Rafael Costa, Helga AG de Valk et al. "Housing Estates in Europe." (2018)

Kohout, Michal, David Tichý, Filip Tittl, Jana Kubánková, and Šárka Doležalová. *Housing Estates*, *What's Next?*. Institute of Building Theory at the Faculty of Architecture, Czech Technical University, 2016.

onto the housing estate, instead of helping to define which portion of it could be fallen under the respective category of 'the street', it poses problems. Thus, in many cases building frontages will be oriented in a reversed way, i.e. back to the street, whereas some buildings would be rather disassociated with the street. Access will also be turned to sides, and direct connection to the street will be sidelined or avoided. Further, compositional characteristics of urban form within the housing estate have a rather frequent variation rhythm, hence the heterogeneity of urban form along the same street manifests on a micro scale. This renders it difficult to build a coherent picture for the whole street based on certain average criteria (e.g. average height of facades along the street). At the same time such random heterogeneity doesn't offer stable features, which could serve to differentiate one portion of the street from another.

The above considerations suggest possible direction for reimagining how the street could be defined within the typology which defies it, to reflect more adequately its functional and morphological conditions. There are a number of conceptual tools investigating spatial relations and practices, which aim at coupling physical settings and human activities (e.g. affordances¹⁵; localé¹⁶). One of such concepts, which seems of particular relevance for our purposes, is that of a 'place'. There is an extensive multidisciplinary discourse around this notion¹⁷. Considerable efforts within it are put into formalization of place, among them is the emergent field of platial research¹⁸, which works on formalization of 'place' by means of GIScience¹⁹. A number of the said for-

Maier, Jonathan RA, Georges M. Fadel, and Dina G. Battisto. "An affordance-based approach to architectural theory, design, and practice." *Design Studies* 30, no. 4 (2009): 393-414.

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¹⁷ Hubbard, Phil, and Rob Kitchin, eds. Key thinkers on space and place. Sage, 2010.

Mocnik, Franz-Benjamin. "Putting geographical information science in place-towards theories of platial information and platial information systems." *Progress in Human Geography* (2022): 03091325221074023

¹⁹ Westerholt, Rene, F-B. Mocnik, and Alexander Zipf. "On the way to platial analysis: Can geosocial media provide the necessary impetus?." In Platial 2018: Workshop on Platial Analysis. 2018.

malization attempts work with functionality of places²⁰, affordances²¹, activities and uses, which inter alia look at formal features of spaces (including built form, configurations of open spaces, design features, etc.). Such approaches seem of particular relevance for the case considered here. They are applicable to urban context at micro scale; the focus on function allows working with the street as a space designated by its particular function of movement; and conceptualization based on formal features indicates possible sources of data collection (along with respective limitations).

Methodology: 'Link Place Form' Tool

'Place' also features prominently in architecture, urban design and planning discourse. While a certain terminological confusion inevitably arises, it also points to the possible touching point, where the concept of place could be integrated into study of urban spaces at micro scale. One of such applications of 'place' appears in the 'Link and Place' concept, conceived as a street planning and design tool²². The tool, apart from measuring performance of the streets, also attempts at categorizing the streets by 'street / road' performance scales, instead of using those two as strict categories. 'Link' designates 'the road' function, wherein 'Place' designates the street as a functioning destination in its own right²³. The concept operates on the premise that link and place work independently of each other; provisions for urban form features are not singled out within separate sets of indicators; and no explicit specification of 'place as function' is given.

What follows is an attempt to rethink the tool taking into account the considerations and challenges outlined above. In particular, an attempt is made to operationalize 'place' and incorporate the way to

²⁰ Papadakis, Emmanuel, and Thomas Blaschke. "Place-based GIS: Functional Space." In *AGILE PhD School*. 2017.

Jordan, Troy, Martin Raubal, Bryce Gartrell, and M. Egenhofer. "An affordance-based model of place in GIS." In 8th Int. Symposium on Spatial Data Handling, SDH, vol. 98, pp. 98–109. 1998.

Jones, Peter, Stephen Marshall, and Natalya Boujenko. "Creating more people-friendly urban streets through 'link and place' street planning and design." *IATSS research* 32, no. 1 (2008): 14–25.

²³ Ibid.

allow for a separate account for formal features impacting the street within the particular typology of housing estate. In order to do so, it is suggested to employ the compositional model of place, worked out by Papadakis, Resch and Blaschke²⁴, which offers a view of place combining material settings and functions afforded by the latter. 'Place' is being formalized there as "a system of spatially organized components that enable a particular functionality" wherein "components are considered as physical entities that enable or disable particular functions and eventually build a place"25. Understood as such, it allows breaking down the 'Place' component of the tool into 'particular functionality', i.e. street performing as public space, and 'spatial configuration of physical objects', which host the said functionality. Wherein the transit function remains under the category of 'Link' in a limited manner insofar as it allows evaluation by 'street - road' scale. In this way, it allows for two important underlying premises to be integrated within the tool. Firstly, functionality is set to be measured by means of formal features available within the particular site, i.e. objects, design and architectural features, built form elements, etc. Thus, much of the needed information could be obtained by means relatively accessible, such as open street maps data, POIs, plans, images, street views, etc. At the same time it entails respective limitations. No data is collected by means of observations of people's behavior within studied settings, or people's attitudes towards it. All accounts for actual uses, practices and activities could only be included in rather limited manner as derived from resulting formal features, e.g. informal pathways evidencing walking across green areas. Respective tailored methodology is needed to be developed in this regard, and incorporation of both could also be envisaged. Secondly, the compositional model attempts at going beyond mere accounting for function and its material settings in the sense of collection of physical objects, but to also account for their configuration, i.e. spatial organization, which could seem of utmost importance for understanding how streets work in housing estates.

Papadakis, Emmanuel, Bernd Resch, and Thomas Blaschke.
"Composition of place: towards a compositional view of functional space."

Cartography and Geographic Information Science 47, no. 1 (2020): 28–45.

Ibid.

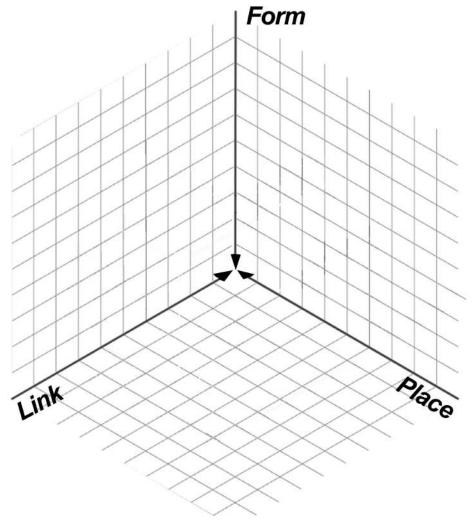


Fig.1 - Link Place Form Matrix - Source: Lizaveta Chepikava 2022.

Given the above considerations, a three-axis matrix is suggested to assess performance of selected street spaces by 'Link', 'Place' and 'Form' categories (see Fig. 01).

Three respective sets of criteria and their evaluation are developed (see Table 1 below).

Link criteria:	I	Position in functional (or any other formal) hierarchy in road / street network (city level).			
	II	Road width by number of lanes, including those assigned for public transport.			
	III	Number of direct connections to other streets.			
	IV	Separation of uses.			
	V	Technical service entrances (loading zones, maintenance access points for utility services, etc.).			
Place criteria:	I	Points of interests (stores, schools, kindergartens, playgrounds, etc.).			
	II	Parking zones.			
	***	Diversity of uses provided for users other than cars by available infrastructure			
	III	/ design features.			
	IV	Diversity of greenery.			
	V	Entrances / direct access to interior spaces.			
Form criteria:	I	Building height gap (ratio of the highest to the lowest building on the site).			
	II	Built form gap (ratio of built form to voids on the site).			
		Elevated or lowered constructions, which allow for changing levels, i.e. mov-			
	III	ing up and down within the site (underground and overhead passages, stylobates, stairs, etc.).			
	IV	Covered constructions (arcades, covered passages, sheds, transport stops, roof			
		structures, etc.).			
	V	Small non-residential buildings (kiosks, pavilions, technical sheds, ventilation shafts, etc.).			

It is important to note, that such sets are inevitably non-exhausting and not intended to provide a comprehensive description of all elements comprising the street, but to tackle certain aspects of it seen as relevant for the considerations outlined above in the context of a particular typology. To test the proposed tool, a case study was conducted on a sample of three sites, located in Marzahn housing estate, Berlin, Germany, as described below.

Case Study Evaluation

Marzahn housing estate was constructed in several stages starting from 1973 on the eastern side of Berlin on the site of an existing village of the same name, part of which still remains, neighboring prefabricated blocks. The housing estate features predominantly 5-, 11-, and in some cases 22-stories prefabricated residential buildings, as well as some other typologies, arranged in varied compositional arrangements. As of 2020, 111,508 residents were living in Marzahn district, total area of which accounts to 19.54 km2. In terms of organization of movements, four major traffic links were conceived dissecting the entire housing estate into sub-districts. Inner circulation was conceived on the principle of separation of traffic and living quarters as 'systems':

'Cars were only one element of this system, integrating with pedestrians, bicycles, and public transportation. Large, open, green spaces were to surround the residential buildings; sidewalks and bike paths would connect the buildings to each other, and to public transportation. Indeed, a minimum distance of 50 m between residences and any roadway had to be maintained.'26.

The above features render Marzahn illustrative of a housing estate as a typology displaying its distinct compositional principles, spatial arrangements and thus a particular nature of street spaces. The selection of sites for the case study pursued the goal to provide for varied spatial conditions deemed to be characteristic of the typology of housing estates.

Based on the general framework outlined above, specific evaluation criteria were developed tailored to the case study to assess the three selected sites, summarized in the Table 2 below.

Rubin, Eli. Amnesiopolis: modernity, space, and memory in East Germany. Oxford University Press, 2016.

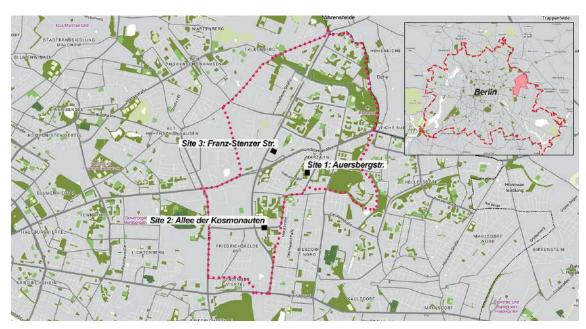


Fig.2 - Plan of Marzahn - Source: Lizaveta Chepikava 2022.

Link criteria	Link criteria								
I II III IV V									
Position in functional (or any other formal) hierarchy in road / street network (city level).	Road width by number of lanes, including those assigned for public transport.	Number of direct connections to other streets.	Separation of uses.	Technical service entrances (loading zones, maintenance access points for utility services, etc.). None = 2 Formal entrances with indirect access to main transit = 1.5 Formal entrances with direct access to main transit = 1 Informal /ad hoc entrances = 0.5					
Level 0 = 2 Level I = 1.5 Level II = 1.2 Level III = 0.9 Level IV = 0.6 Other = 0.3*	+0.2 for each lane Bonus: +0.2 for one-way bus lane +0.4 for two-way bus lane	+0.4 for each direct connection Bonus: +0.4 for direct connection to top 3 level links in functional hierarchy	Full separation = 2 Formal separation (by design) = 1.5 Informal shared space = 1 Shared space = 0.5 No separation = 0						
Place criteria:									
I	II	III	IV	V					
Points of interests (stores, schools, kindergartens, playgrounds, etc.).	Parking zones.	Diversity of uses provided for users other than cars by available infrastructure / design features.	Diversity of greenery.	Entrances / direct access to interior spaces.					
+ 0.2 for each POI (based on estimated max number of POIs per site 10 POIs) Bonus: - 0.1 if POI is fenced off / has no direct access	Under 10% = 2 From 25 % to 10 % = 1.6 From 50% to 25 % = 0.9 Over 50 % = 0 (of total site area excluding road surface area) Bonus: - 0.2 for informal parking	+ 0.4 for each use Bonuses: + 0.4 for hardscaping elements (sculptures, urban art, fountains, etc.) - 0.2 for informal alterations to infrastructure aimed at compensating for its inadequacy (informal pathways, etc). (based on assumption of general types of infrastructure allowing for basic activities for 2 categories of users: people sitting / walking; bikes riding / parking)	Trees = 0.8 Shrubs / green edges = 0.4 Flower beds = 0.2 Grass = 0.1 Open ground / soil = 0 Bonus: + 0.5 for combination of at least 3 categories	Public entrances = 0.8 Residential entrances = 0.4 Service entrances (other than for cars) = 0.2 No entrances = 0 Bonus: + 0.6 for over 2 public entrances					
Form criteria:									
I	II	III	IV	V					
Building height gap (ratio of the highest to the lowest building on the site).	Built form gap (ratio of built form to voids on the site).	Elevated or lowered constructions, which allow for changing levels, i.e. moving up and down within the site	Covered constructions (arcades, covered passages, sheds, transport stops, roof structures, etc.).	Small non-residential buildings (kiosks, pavilions, technical sheds, ventilation shafts, etc.).					
From 1 to 1.16 = 2 From 1.16 to 1.4 = 1.8 From 1.4 to 1.75 = 1.6 From 0.75 to 2.3 = 1.2 From 2.3 to 3.5 = 0.8 From 3.5 to 4 = 0.4 (Calculation formula: $X = \frac{y(a)}{y(b)}$ $y(a) =$ number of range for the highest building $y(b) =$ number of range for the lowest building Numbers of ranges: 1 to 3 storeys = 2 4 to 5 storeys = 3 6 to 9 storeys = 4 10 to 16 storeys = 5 17 to 19 storeys = 7	0%-20% voids = 2 20%-40% voids = 1.6 40%-60% voids = 1.2 60%-80% voids = 0.8 80%-100% voids = 0.4	None = 2 From 0 to 6 steps = 1.5 From 7 to 12 steps = 1 From 13 to 24 steps = 0.5 Over 25 steps / underground overhead passage = 0 (estimated, based on design standards for stair flights)	+0.4 for each object below 5 Over 5 objects = 2	Over 6 objects = 1.2 5 objects = 1 4 objects = 0.8 3 objects = 1.6 2 objects = 0.4 1 object = 0.2 Bonus: + 0.8 if at least one object hosts POI					

Fig.3 - Case Study Evaluation Guide - Source: Lizaveta Chepikava and Liudmila Slivinskaya 2022.

Site 1: Auersbergstr.

The site is located in the most inner area of the housing estate (the highest level of privacy of space) featuring only residential buildings and space that could be considered a courtyard. It features two lanes separated by greenery serving for direct access to residential entrances. In terms of urban form it features 5-storey short slabs (which is often considered to represent 'human scale' of residential buildings). However, it is interspersed with 11-storey buildings which change the height dynamic of the site away from 'human scale'. In addition, it also displays some other notorious features often listed as 'problematic' in housing estates: purposeless green spaces, lack of spatial articulation. (See Fig. 04)

Site 2: Allee der Kosmonauten

The site covers an area featuring a high order transit link of 5 lanes, including bus and tram lines. In addition, there is a parallel access road along a residential slab separated by greenery and parking zone. In terms of adjacent urban form, it displays some characteristic features of housing estates: combination of high-rises and slabs interspersed with extensive voids, wherein residential buildings meet the transit space with sides, not front facades. Further, it also illustrates the thesis about the inverse relations between movement and urban place²⁷. Thus, it borders (but doesn't include) an important public space & community center, but it is relegated from the main transit link by several 'buffers' (buildings, greenery, parking zones). (See Fig. 05)

Site 3: Franz-Stenzer Str.

The site covers an area adjacent to the backside of a large shopping mall (which is a recent addition (construction finished in 2005), but which could be seen as an heir to the previous shopping center which was located on the site prior). It borders, but does not include the side entrance. It features a one-way road with a parking zone allowing for exit to the higher level transit link through a roundabout. On the other side it is lined with a continuous facade of 11-storey residential slab. The impression given by the site from the plan is closer to the conventional image of the street – continuous facades on both sides, no inter-

²⁷ Marshall, Stephen. Streets and patterns. Routledge, 2004.



Fig.4 - Site 1: Auersbergstr. Plan - Source: Lizaveta Chepikava and Liudmila Slivinskaya 2022.

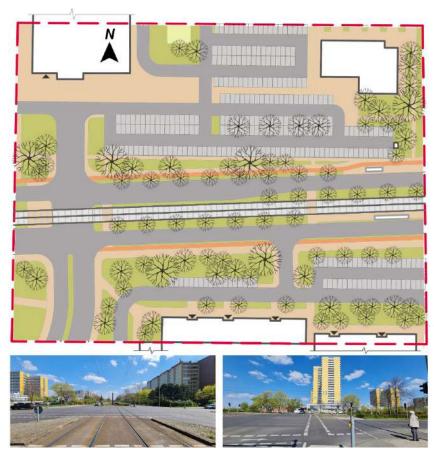


Fig.5 - Site 2: Allee der Kosmonauten Plan - Source: Lizaveta Chepikava and Liudmila Slivinskaya 2022.

ruptions by voids or height differences, and a number of commercial activities. (See Fig. 06)

The Table 3 below summarizes the results of evaluation for all three cases, followed by the discussion and conclusions. (See Fig. 07)

Discussion and Conclusion

The study of three sites undertaken here was conceived as a testing ground for relevance and efficiency of the suggested tool expected to be applicable within the typology of housing estate. It could be preliminarily concluded that the analysis conducted within such a framework allows for certain insights to be gained, which expand our understanding of how street spaces are working given the specificity imposed on them by the typology.. (See Fig. 08)

Certain observations were made regarding relevance and significance of criteria which are specific to the street spaces within housing estate and otherwise might be overlooked. E.g. positioning of entrances fails to exploit full potential that could be realized for the street to work as 'place' within both indoors and outdoors and contribute to enclosing POIs onto themselves, thus limiting their 'place effect' to indoors and undervaluing the potential of adjacent outdoor street space.

Further, some reflections on evaluation of contribution for certain formal features have also been made, confirming specific distinct nature of the housing estate, including how it impacts performance of the streets within it. E.g. separation of movement flows, being one of planning principles for housing estates, often resulted in such design solutions as skywalks, overhead walkways, ramps, elevated passages and the likes, which proved to be non-optimal and non-desirable for residents. Hence respective weight needs to be attributed to a criterion accounting for them. Further, covered constructions, while in general adding in functionality and attractiveness of space could also be of ambiguous contribution to urban form given the particular typology under consideration, hence sensitive evaluation criteria needs to be set.

Further, some tentative directions for expanded exploration were outlined regarding relations among three axes. Thus, it could be assumed that indeed 'Link' and 'Place' seem not to be inversely related, whereas high performance by transit function does not necessarily

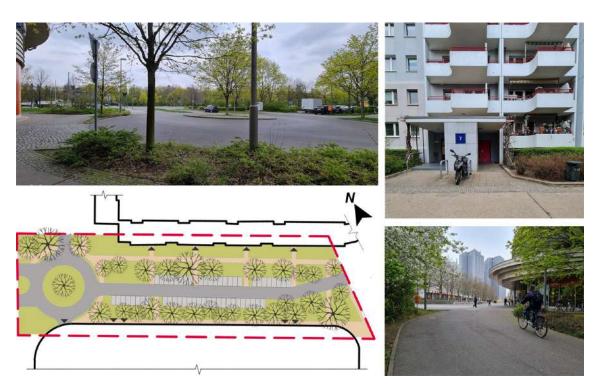


Fig.6 - Site 3: Franz-Stenzer Str. Plan - Source: Lizaveta Chepikava and Liudmila Slivinskaya 2022.

Criteria	Site 1: Auersbergstr.	Site 2: Allee der Kosmonauten	Site 3: Franz- Stenzer Str.
Link:			
I. Position in functional (or any other formal) hierarchy in road / street network (city level).	0.3	0.9	0.3
II. Road width by number of lanes, including those assigned for public transport.	0.2	1.4	0.2
III. Number of direct connections to other streets.	0.8	1.2	1.1
IV. Separation of uses.	0.5	1	1
V. Technical service entrances (loading zones, maintenance access points for utility services, etc.).	1	1.5	1.5
Total:	2.8	6	4.1
Place:	-	'	
I. Points of interests (stores, schools, kindergartens, playgrounds, etc.).	0.2	1	0.4
II. Parking zones.	1.8	0.7	1.8
	(7.7%)	(33.6%)	(9.6%)
III. Diversity of uses provided for users other than cars by available infrastructure / design features.	1	1	1
IV. Diversity of greenery.	1.4	2	2
V. Entrances / direct access to interior spaces.	0.4	1.4	1.4
Total:	3.8	6.1	6.6
Form:			
I. Building height gap (ratio of the highest to the lowest building on the site).	1.8	0.4	1.6
II. Built form gap (ratio of built form to voids on the site).	1.6	1.2	2
	(34%)	(46%)	(11%)
III. Elevated or lowered constructions, which allow for changing levels, i.e. moving up and down within the site (underground and overhead passages, stylobates, stairs, etc.).	2	1	1.5
IV. Covered constructions (arcades, covered passages, sheds, transport stops, roof structures, etc.).	0	0.8	0
V. Small non-residential buildings (kiosks, pavilions, technical sheds, ventilation shafts, etc.).	0.2	0.2	0
Total:	5.6	3.6	5.1

Fig.7 - Case Study Results- Source: Lizaveta Chepikava and Liudmila Slivinskaya 2022.

entail the proportional drop in 'Place' function of the site. At the same time, if we attempt at making assumptions regarding interdependent relations of 'Form' with the above two, it could be preliminarily concluded (subject to further testing), that 'Link' and 'Form' have somewhat more articulated interdependence, which tends to be increasingly sensitive towards the extremes. That is, the higher the performance of the respective street by its transit function, the more chances to expect the lower performance by 'Form' criteria. It is important to note that this is not to say that causal relations exist between the two. Causes for such state of affairs might lie in planning principles referred to above, such as intentional relegation of public spaces away from transit. Nevertheless, the tool then (if applied on a sufficient number of sites) might allow detection of this pattern.

At the same time, 'Place' and 'Form' seem to be related more loosely, not displaying articulated tendencies. Some features seem to play into each other's performance, thus establishing a certain connection (e.g. small non-residential buildings, while contributing to 'Form', enhance such contribution if they also correspond to POIs) . At the same time, those are not sufficiently manifested to draw further conclusions. Further steps are needed to test it on a larger sampling of sites within the same typology, and within housing estates from varied contexts to test its applicability and confirm assumed patterns or tendencies.

Finally, the tool allows drawing attention to the problem of defining the streets within the ambiguous space of housing estate. The complex entangled nature of spatial arrangements within the housing estate precludes decomposing it into clearly defined compositional units (street, courtyard, etc.). As the case study shows, street spaces in housing estates could merge into spaces of very different nature, as for ex. in the case of quasi-courtyard space adjacent to road space with no articulation in Site 3, while still being 'street spaces'. At the same time, formal features of adjacent built form, which could potentially help us define the street according to commonly used definitions are often not to be found on the site. In this regard the suggested framework seems to allow more sensitivity to such situations, as not being aimed at only designating pure 'street space' based on formal features, but allowing for analyzing the resulting hybrid areas featuring streets, but not limited to it.

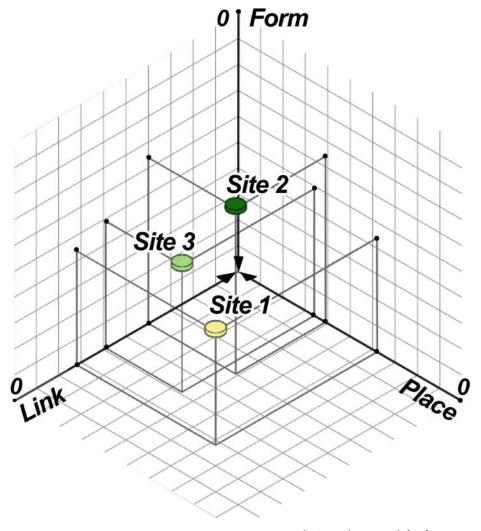


Fig.8 - Sites on Link Place Form Matrix- Source: Lizaveta Chepikava 2022.

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Streetspace allocation – new tools and methods, with a Lisbon application

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Abstract

The allocation of space to different uses in busy city streets is a complex and contentious process. Decisions to reallocate streetspace are usually based on public consultation and modelling of a few street redesign options, but results are not compared systematically. In addition, the set of options considered is usually incomplete. This paper proposes a new process for streetspace reallocation, including option generation (with online and physical tools), estimation of performance indicators (with microsimulation), and comparison of options (with a new appraisal tool). The process was applied to the redesign of a busy street in Lisbon. Several options were generated, all involving reducing the space allocated to general motorised traffic. Microsimulation showed that allocating more space to some street uses also bring benefits to other uses. The option to allocate more space to both bus users and pedestrians does not deteriorate movement by other modes. However, appraisal showed that some redesign options go against technical/design standards or political priorities.

Keywords

Streetspace allocation; street design; option generation; appraisal; Lisbon

Introduction

The allocation of space in busy city streets is complex: planners need to decide what space can be used, for what, how, and when. Trade-offs

need to be made, as it is generally not possible to fully accommodate the needs of all street uses, including movement by different modes, parking/loading, picking-up/dropping off passengers, waiting for buses, and 'place activities' (e.g. sitting, socializing, playing). Pressures on streetspace are growing, given the development of new forms of mobility (e.g. shared mobility, micro-mobility) and changes in patterns of consumption (e.g. home deliveries). In addition, planners are more aware of the economic, social, and environmental benefits of good-quality streets for pedestrians and 'place activities', especially in the aftermath of the COVID-19 crisis, which led to less commuting and more use of local streets.

The allocation of streetspace is a technical issue, facilitated by new developments such as real-time information collection and variable message signs. It is also a political issue, subject to conflicts (users using space that has not been allocated to them) and protest by stakeholders (e.g. street users, residents, business). These conflicts and protests happen in part because the allocation process is not fully transparent: it relies on modelling and public consultation, but without using formal methods to identify and compare the options for space reallocation. As a result, the number of options presented to modellers and the public is small, without a justification of their relevance, or assurance that alternative options were considered. In addition, modelling tends to focus only on movement (producing performance indicators such as speeds and delays), with little information on the effect of different street designs on stationary activities, such as vehicle parking.

This paper presents a new process for streetspace reallocation (the MORE Process), starting with formal option generation procedures (using with two new online tools and a physical design toolkit. The options are then modelled, using microsimulation software, and compared using a new appraisal tool that integrates a variety of indicators for movement and stationary activities.

Lisbon application

The process was applied in five cities in Europe: Lisbon, London, Malmö, Budapest, and Constanta. This paper presents the results of the Lisbon application. The case study street is Rua Morais Soares, a busy street in the city centre with intense demands on space, for walking, cycling, moving by car and bus, car parking, loading, and place activi-



Fig.1 - Aspect of the Lisbon case study street - Source: Authors 2022

ties (Fig. 1). The street is 22m wide – too narrow to fully accommodate all demands for space. Currently, the space is mostly allocated to cars, with two lanes of movement plus a parking lane on each side. Footways are narrow (1.6–1.8m), below even the "absolute minimum" of 1.8m recommended in the *Global Street Design Guide* (NACTO and GDCI 2016, p. 80). This is insufficient on its own, but more so due to the presence of street furniture (traffic signs, bins, shopfront displays), which limits the movement of pedestrians. Other needs for space (e.g. cycling, place activities) are not being fully satisfied due to the lack of dedicated space. The main political priorities for this street, according to the city authorities are:

More space/better conditions for pedestrians (walking and crossing the street), place activities (e.g. strolling, sitting), and passengers waiting for buses
 Not deteriorating the movement of buses
 Achieving the following policy objectives: more sustainable modal split, more place activities and social interaction, im-

First stage: Option Generation (Online Tools)

proved wellbeing, and more greenery

Two new option generation tools were developed. Both are freely available from https://ifpedestrians.org/roadoptions/public

The Streetspace Interventions tool generates options to reallocate space or time to different street uses, redesign streetspace, or regulate how the space can be used. The tool selects options that fulfil specified priorities regarding which street uses to improve, which uses not to deteriorate, and the five most important policy objectives to achieve. The selection, from a database of 210 options, is based on the likely effect of the options on 28 different street uses by 15 street users (e.g. cyclists moving, cyclists passing through junctions, cyclists parking), and the likely effect on 28 policy objectives (e.g. promote local economy, reduce social exclusion, reduce air pollution).

The *Street Designs* tool generates options to allocate street width to different street design elements (e.g. cycle lanes, bus lanes, space for parking/loading). The tool selects options that fulfil specified priorities regarding which elements should have more space, constrained to the total available width and other design considerations (e.g. buffers

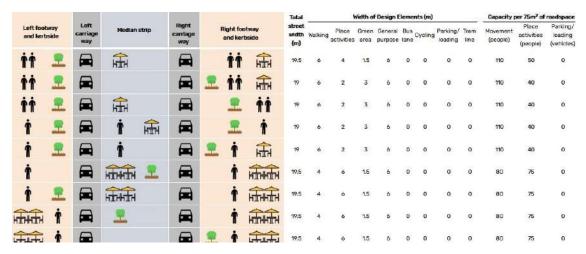


Fig.2 - Extract from application of Street Designs tool in Lisbon - Source: Authors 2022

between some elements). The selection considers all permutations of various possible widths of all design elements.

The application of the *Streetspace Interventions* tool in Lisbon used as inputs the political priorities presented at the end of the previous section of this paper. Two options fulfilled all the priorities: reduce number of traffic lanes and decrease number of parking spaces. The application of the *Street Designs* tool identified 65 possible designs. Fig.2 is an extract of the results page of the tool, showing a variety of possibilities for adding and rearranging design elements so that footways can be widened and extra space can be allocated to green areas and place activities. Some of the designs were selected by city planners to be carried forward in the process (microsimulation and appraisal).

Second stage: Option Generation (Physical Design Toolkit)

Further design options can be generated by stakeholders in workshops, using a newly developed physical toolkit. This toolkit contains acetates representing different type of lanes (e.g. cycle lanes, bus lanes) and blocks representing other street design elements (e.g. parking bays, loading bays, taxi stands, bus stops). All elements are represented at the same scale. Workshop participants then create street designs, in cross section, that fit into the street width. The designs can then be imported into design software. The applications of the MORE Process in the five cities used LineMap (https://www.buchanancomputing.net/linemap). Designs can be refined and exported to microsimulation software (e.g. PTV Vissim) and consultation platforms (the applications in the five cities used TraffWeb (https://www.buchanancomputing.net/traffweb).

The Lisbon workshops were held on the street, in the same section being redesigned. Passers-by were invited to contribute. The workshops led to the creation of five design options. All involved removing one lane of traffic in each direction and, in some cases, also parking lanes. The released space was used for wider footways (in all options), and for dedicated space for other uses (different in each option): cycle lanes, bus lanes, median strips, green areas, or space for place activities. Fig.3 shows two of the designs created. Some of the designs were selected by city planners to be modelled and appraised.

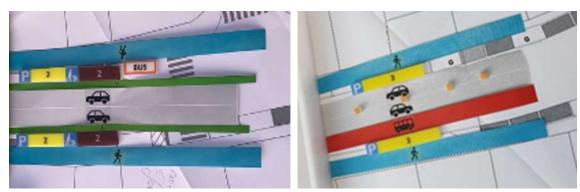


Fig.3 -Examples of designs created with the MORE Street Design Toolkit - Source: Authors 2022)

Third stage: Microsimulation

The options for street redesign can then be modelled. The MORE Process uses PTV Vissim, software that simulates interactions between street users and estimates average travel times, speeds, and delays for each type of user. The software was improved for this project, including more realistic interactions between motorised vehicles and pedestrians, and a better representation of vehicle parking (allowing for the estimation of number of vehicles that cannot be parked due to the unavailability of space).

In the Lisbon case, four street redesign options were modelled, plus the "do nothing" option. All redesign options involve the removal of one traffic lane in each direction and wider footways. *Option 1 (Priority to parking)* transforms parallel to diagonal parking. The other three options reduce parking space and allocate the released space to:

Option 2 (Priority to bus): bus lanes in both directions

Option 3 (Priority to cycling): cycle lanes in both directions, pedestrian refuge in the median strip

Option 4 (Priority to bus and pedestrians): bus lane in one direction, even wider footways

Modelling was for the AM and PM peak periods. Table 1 shows the results of the modelling, compared with the "do nothing" option

As shown, allocating more dedicated space to a given mode(s) improves the conditions of that/those mode(s) although in some cases the improvement is small. However, some options have added benefits of improving other modes. Priority to bus and pedestrians does not deteriorate movement by any mode, only vehicle parking.

Fourth stage: Appraisal

The final stage of the *MORE Process* is appraisal. A new tool is used to compare street design options based on cost (implementation and maintenance) and performance indicators for movement, stationary activities, and wider economic, social, and environmental impacts. Three types of assessments are made:

Political and technical assessment (highlighting the options that go against political priorities or technical or design standards) – this requires specification of political priorities

Op- tion	Priority	Effects on priority use	Positive effects on other users	Negative effects on other users
1	Parking	All demand for parking is met		Longer travel times for cyclists and all motorised modes
2	Bus	Slightly shorter bus travel time		 Longer travel time for other motorised modes Higher pedestrian density More vehicles that cannot be parked
3	Cyclists	Slightly shorter travel time for cy- clists		 Highest travel times for all motorised modes, out of all options More vehicles that cannot be parked
4	Bus and pedes- trians	Slightly shorter bus travel timeLower pedestrian density	travel time for all	Highest number of vehicles that cannot be parked

Fig.4 -Table 1: Effects of the four street redesign options (from modelling)

Cost-benefit analysis

Multi-criteria analysis (ranking of options) – this requires specification of the degree of importance of each indicator for various tool users.

The Lisbon case study included political assessment and multi-criteria analysis. The political priorities are those specified above (under "Lisbon application"). The input for multi-criteria analysis was provided by three city planners. Cost-Benefit Analysis was not performed because of lack of data for unit monetary values of performance indicators (another required input).

The set of performance indicators included: volume, speed, travel time, and delays disaggregated by mode (pedestrians, cyclists, buses, cars/taxis, motorcyclists, and goods vehicles); pedestrian density; number and average duration of car parking, bus stopping, and loading activities; vehicles that could not be parked; number of people strolling; and number of people sitting. No indicators were considered for movement using micromobility vehicles, cycle parking/share, reliability of travel time (for all modes), and trip quality. Estimates were included for the effect of the redesign options on property prices, visits to local shops, PM10 emissions, NO2 emissions, and fuel consumption.

The political and technical assessment showed that:

Options 1 and 3 violate the city's political priority not to deteriorate bus movement (as shown in Table 1 above).

Options 1 and 2 violate the city's priority to have more greenery (no extra space is provided for green areas in those two options)

Options 1–3, and the "do nothing" option violate principles of inclusive design (no full provision is made for pedestrians with disabilities)

Multi-criteria analysis showed that Option 1 was better for stationary activities, Option 2 was better for movement and environment aspects, and Options 3 and 4 were better for economic aspects.

Conclusions

The MORE Process brings objectivity to the allocation of space in busy urban streets, a process that is currently based on political decisions and subject to controversy. The new online option generation tools produces a series of feasible options for reallocating streetspace that could otherwise not be included in the reallocation process. The

physical toolkit then facilitates discussion and consensus among street users to generate further options. The improved procedures for microsimulation bring a more realistic and balanced perspective to modelling, which currently tends to rely on performance indicators for movement (especially of motorised vehicles). Finally, the appraisal tool accounts for a variety of effects of street allocation on various users and policy objectives.

The application in Lisbon illustrated the use of this process to generate, model, and appraise a set of feasible options to reallocate space in an urban street with space constraints and various demands for that space. The options generated reallocated space away from private vehicles, allowing more space for pedestrians, cyclists, buses, place activities, or greenery. Microsimulation showed that the benefits of some options are not limited to the targeted street use. However, appraisal showed that some options go against technical/design standards and political priorities.

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Phoenix Poblenou

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Abstract

In recent decades, governments and local administrations across the globe have been increasingly exploring ways to facilitate citizen and stakeholder engagement in decision-making, in response to complex urban issues. Traditional participatory tools in urban regeneration are fostered by the advancements in Information and Communications Technology, such as digital platforms and mobile applications that enable open communication among stakeholders. This paper presents the development of such a digital platform, named Phoenix Poblenou, for the open collaborative implementation of urban solutions that promote urban vibrancy in the Poblenou district of Barcelona, Spain. The data-driven methodology of the Phoenix project includes three phases. First, data analysis tools, space syntax techniques, and computational algorithms are used for the scientific analysis of the area's urban vibrancy. Second, a catalogue of solutions that promote urban vibrancy is created where design experts can submit their urban design propos-

als and re-evaluate urban vibrancy in the area. Third, a feedback-oriented experts' interface in the Phoenix digital platform is developed to visually communicate the analysis results to the design experts that further wish to submit their urban design proposals. The digital platform also serves as a tool for visualization, active participation and monitoring of the targeted solutions for the non-experts' agents of the urban environment.

Keywords

Participatory Urban Design, Data-Driven Design, Urban Vibrancy

Introduction

The decision-making process is facing several challenges over the last decades. The urgent need for solutions to the rapidly-changing urban phenomena has motivated policymakers and planners, to reflect on new ways to make urban decisions. Participatory planning has gained significant interest in all public spheres, as citizen involvement can bring many benefits to the urban design process. (Pérez-delHoyo et al., 2018) An open and flexible urban design process allowing continuous inputs and feedback is essential for effective participation (Arslan, 2021).

In addition, the ambition to make cities inclusive, safe, resilient, and sustainable is highlighted in several international policies, and visions, including the United Nations Sustainable Development Goals, the New European Bauhaus, and the New Urban Agenda.^{3,4,5} In order to take action and evaluate progress towards this goal and its targets, it is crucial to have access to data and information that can make this process as informed and efficient as possible.

Participatory projects

Engaging citizens in city planning and management is a necessity in order to design more inclusive cities and more resilient communities. The Placemaking Chicago Project⁶, a placemaking guide, offers a better understanding of the ways citizens are motivated to bring change and improvement to their neighborhood. In this project, local people were given the opportunity to identify the challenges and collect data on problematic sites. With the help of the technical team, citizens were

motivated to put their ideas into practice firstly on small-scale implementations. At the end of these processes, planners and locals cooperated to determine short, medium, and long-term actions for each idea. Citizens actively participated in the process offering their thoughts and ideas on the process whereas planners were in charge of solving the technical issues, analyzing the ideas, and phasing the project.

According to Eric Reynolds, "The simple, short-term, and low-cost solutions that are having remarkable impacts on the shaping of neighborhoods and cities" is the definition of "The Lighter, Quicker, Cheaper Transformation" ideology (Maciver, 2010). Project for Public Space initiative operationalized this ideology through their placemaking projects addressed to the people who use these spaces every day. Citizen-led changes that were developed through the years include a pop-up bike lane⁸ in a small city in Georgia, USA, a marketplace built from a collection of salvaged shipping containers in Brooklyn, New York, and a public dance floor on the vacant spaces left after the massive earthquake¹⁰ in Christchurch, New Zealand.

Similar projects at different scales with various levels of development are carried out in many countries. The common perspective they all share is the importance of engaging non-expert agents of the urban space such as citizens and regular users to verify the need, make suggestions, and lead the change. The unique and creative projects mentioned above address proprietarily the local urban settlement for which they are proposed and the undeniable power of citizen-led change as a bottom-up approach.

Phoenix Poblenou

This paper aims to highlight the benefits that data-driven participatory planning tools can offer to the change-makers of the urban environment. The proposed methodology promotes the analysis of urban vibrancy for a more sustainable and resilient urban environment.

Urban vibrancy is associated with activity intensity, the diversity of land-use configurations and the accessibility of a place. It was first introduced by J.Jacobs as the "urban vitality" of street life over a 24-h period of time (Barreca et al, 2020). Montgomery J. suggested that urban vibrancy could be described as the number of people present all around streets or neighborhoods during day and night and related it to differ-

ent land uses (Montgomery, 1998)

In recent studies, urban vibrancy is considered a driving force for comprehensive, coordinated, and sustainable urban development and strategic planning (Li et al., 2020; Barreca et al., 2020). The identification of urban areas characterized by different vibrancy levels can "support a deep knowledge of the current status quo and reflect the dynamics of an urban space behind the static physical structures"¹¹. Such data analyses can provide the drivers towards more efficient, sustainable, and resilient cities(Barreca, 2020).

The scientific literature contains various indices used to determine the level of vibrancy on different scales, with urban morphological elements being the most common. Morphological metrics like "dense street networks, small and medium-sized blocks, diverse and intense buildings, and land uses" are some of the main indicators of a vibrant urban space.

In a broader discipline, urban morphology deals with the built form, the urban elements of a city, and the socio-cultural essences embedded in them (Kropf K., 2013). It is linked with psychological and physical demands, socio-cultural preferences, economic objectives, technology requirements, and the advancement of future cities. Urban morphology can improve urban vibrancy locally by examining the individual spatio-temporal effect of urban morphology on vibrancy. (Li et al., 2020) This paper explores the tangible and intangible urban morphological metrics that can become indices to determine urban vibrancy on a neighborhood scale.

Methodology

The advancements in digital technologies offer a variety of big data showing how people experience urban areas. Through the analysis of multi-source geographical open data, static morphological elements along with location-based data, the level of urban vibrancy in any given area can be determined with fine granularity.

Phoenix project proposes a data-driven methodology for the analysis of urban vibrancy through urban morphological metrics, developed in three phases: Analysis, Development and Proposal . Initially, a scientific analysis of an area's urban vibrancy is conducted. The identified most and least vibrant areas are used to extract information creating a catalog of solutions that can increase the urban vibrancy levels. Reevaluating the total vibrancy levels for each solution promotes a more

data-driven design approach.Lastly, the development of an inclusive interface aims to bring together all the expert and non-expert agents of the urban area into a feedback-oriented, active participatory digital environment.

Analysis

The interactive effect of urban morphology on urban vibrancy is based on the integration of various factors such as the built environment, the ground level space of the city and intangible aspects like human activities. Consequently, the analysis of urban vibrancy is explored on three axes: (1) vibrancy of the built environment, (2) vibrancy of the ground floor, and (3) human behavior (Fig. 01). Each aspect is further correlated to specific indices and datasets.

The vibrancy of the built environment focuses on the analysis of the morphological metrics of the area. The starting point is the metrics that Li et al. identified in their study¹³. The crucial elements were: roads, buildings, blocks, and points of interest. Each one of these metrics is analyzed and visualized individually, creating a density grid layer (Fig.02). Space syntax metrics such as angular integration and choice are calculated and analyzed.

The vibrancy of the ground level is about the ground-level elements of a city that promote activities and interaction. It consists of 4 metrics: mixture of activities, existence of items, active facades and mixture of uses. Each one is assigned score values based on a point system, later used to quantify vibrancy levels. For the purpose of this study, ground-level includes public space, roads and the "plinths" of the city, which are "the ground floors that negotiate between between public and private" Thus, the activeness and openness of the street fronts of the buildings and the surrounding activities are crucial metrics for this analysis.

The third category is about human behavior. Human activities and human interactions with cities are reflected in urban vibrancy (Runde Fu et al, 2021). According to Li et al., "The measurement of urban vibrancy can be transferred into the assessment of the intensity of human activities in urban space"¹³. On a macro urban scale, the best indicator of activity intensity might be the number of active people per sub-area (Runde Fu et al, 2021).

Development

The development includes the combination of all the maps created in

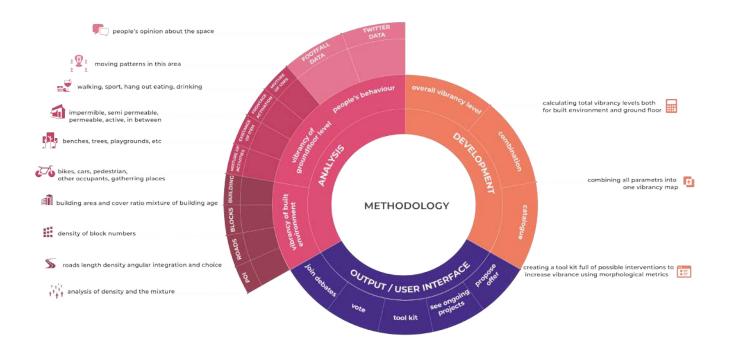


Fig.1 - Methodology - Source: Author 2021

Vibrancy type	Morphological Clusters	Indicator	Details	
v vr-			The degree of building ages mixture was	
			calculated using the entropy equation13	
		Building Age Mixture	$MixBuA = -\sum_{i=1}^{n} p_{i} log_{2}p_{i}$	
	Buildings	Building Age Mixture	where n is the number of different building age	
			categories, and the ith building age category has a	
			relative proportion of pi ¹³	
		Building Cover Density	The total of buildings divided by the area of eachneighborhood; the higher the ratio, the	
			higherthe density ¹³	
		Building Area Density	The total spatial construction area divided by	
			thearea of the neighborhood; the higher the ratio, the higher the intensity ¹³	
		Blads Descite	The total number of blocks divided by the area of	
	Blocks	Block Density	each neighborhood ¹³	
	Roads	Road Length Density	The total length of roads divided by the area of each neighborhood ¹³	
			_	
		Angular integration and choice of roads ¹³	Angular integration measures "how close each segment is to all others in terms of the sum of	
			angular changes that are made on each route"17;	
T73 61 34:			whereas choice measures "how likely a street segment is to be passed through on all shortest	
Vibrancy of building environment			routes from all spaces to all other spaces in the	
			entire system". 16 To calculate these metrics, depthMapX tool was used.	
		Points of Interest Mixture	The degree of mixture of points of interest across 4 categories which uses the entropy equation ¹³	
			$MixPOI = -\Sigma_{i,\tau} p_i \log_2 p_i$	
			where n is the number of points of interest	
			categories, and the <i>i</i> th category has a relative	
		Commence & Commission Points of Interest Descrite	The total number of commerce and service Points	
	Points of Interest or POI	Commerce & Services Points of Interest Density	of Interest divided by the area of each neighborhood ¹³	
	Tomas of iniciast of For		The total number of outdoor and recreation Points	
		Outdoor and Recreation Points of Interest Density	of Interest divided by the area of each	
			neighborhood ¹³ The total number of transport related Points of	
		Transport Points of Interest Density	Interest divided by the area of each	
			neighborhood ¹³	
		Work and education Points of Interest Density	The total number of work and education Points of Interest divided by the area of each	
		Work and concaron I omes of interest Density	neighborhood ¹³	
		Bike lane +5 points	Ground-level vibration data were collected through on-site observations. A simple score system was created in order to evaluate important	
		Road +2.5 points		
	Mixture of uses	Pedestrian pathway +5 points		
		Occupied by other uses +5 points		
		Gathering space +7.5 points Impermeable - impermeable 0 points		
	Frontage acitivation	Impermeable - semi permeable +5 points		
		Impermeable - permeable +10 points		
		Semi permeable - permeable +15 points		
		Permeable - permeable +20 points	metrics for the study. According to this, each segment of the road matrix divided into the x- and y-axes, was assigned a vibrancy value between 0 and 100. Lastly, each index was weighted	
Vibrancy of groundfloor level		Active in-between space +25 points		
		Something to sit +5 points		
		Trees +5 points	according to the significance gained within each cluster (Mixture of uses, Frontage activation,	
		Kids' items +5 points	Existance of item, Mixture of activities)	
		Other specialized items +5 points Walking +5 points	-	
	Mixture of activities	Running / Sports +5 points		
		Sitting / Stable +5 points		
		Eating / Dirinking +5 points		
		Playing +5 points		
		Communicating with others +5 points		
	Twitter data	Density of Points	Twitter data were used to calculate the density of	
			geolocated points that people have shared with their network in the area.	
	GPS data	Parity 6P in		
Harris D. Carris			GPS data were used to obtain information regarding the people coming and leaving the area,	
Human Behavior		Density of Points	as well as the most and least preferred areas of the	
			neighborhood.	
			On-site observations were used mostly as a	
	On-site Observations	Validation & Feedback	validation metric for the analysis results that were	
			already gathered.	

Fig.2 - Vibrancy Indicators - Source: Author 2021

the previous phases with the use of average formula into one evaluated density grid map that shows the total urban vibrancy of an area. This provides information about the neighborhood's most and least vibrant areas. The most vibrant areas can become referenced to inform design solutions for the less vibrant ones.

In addition, a catalog of urban interventions is created in this phase. This includes potential solutions for the least vibrant areas or potential improvements for the more vibrant ones. This catalog is the basis of the digital toolkit that will promote active participation in the area.

Proposal

The output of Phoenix project is a collaborative, inclusive platform that promotes urban vibrancy. Targeted to all the agents of the urban environment, the Phoenix platform promotes active participations and is a place where design experts, decision–makers, and non–experts can connect to get informed about the projects, learn about the vibrancy levels and make more data–informed decisions for each area.

The platform implements the phoenix methodology into three features: (1) An urban vibrancy analysis and visualization toolkit, (2) a catalog of ideas that promote urban vibrancy and, (3) a feedback-oriented environment that brings together all the agents of the neighborhood.

Phoenix Poblenou

Poblenou case study

Poblenou, a formerly industrial area, is part of the Saint Marti district of Barcelona. It is widely known as the innovation hub of the city, developed between 2000 and 2009 under the 22@ proposal. The initial plan led to the creation of an area innovation and economic activity integrated into the existing neighborhoods, transforming Poblenou into an important economic hub of the city. However, due to years of gentrification and impacts of the financial crisis the neighborhood experienced dramatic changes to its physical and human landscape. The challenge of Poblenou today is to become a vibrant neighborhood balancing housing and economic development.

The City Council, promoting a more inclusive design process, updated the 22@ plan in 2017 with the help of all agents of the quadruple helix:

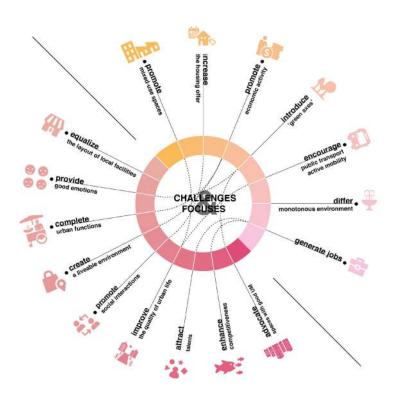


Fig.3 - Challenges of Phoenix Poblenou project - Source: Author 2021

citizens, economic sector, universities and public administrators. This new plan promotes a new Urban Regeneration Strategy that aims to achieve a mixed city of environmental quality¹⁵.

The ongoing development of Poblenou offers a great opportunity to study a test case of the Phoenix Project methodology. The updated proposal is highlighting among others the development of green streets, new buildings tackling social housing, social manufacturing sectors promoting mixed-use spaces¹⁶, and the expansion of the companies' focus sectors to a green, circular economy. Including these axes, the area's most important challenges for a more inclusive, sustainable and vibrant Poblenou were identified (Fig. 03).

Analysis

Based on the Phoenix methodology explained above, the initial phase consists of the vibrancy of the built environemnt analysis (Fig.04). Amongst the great quantity of open data available for the city of Barcelona, several open datasets were selected. The analysis was conducted with computational algorithms such as the entropy equation for calculating the degree of mixture of building ages, density of elements like points of interest or blocks, and the buildings' area and cover ratio. For visualization and mapping, GIS software and computational tools like Grasshopper have been used.

The data for the vibrancy of ground-level were gathered through on-site observations. The road matrix was divided into x and y axes and each segment was assigned a vibrancy value based on the metrics' point system(Fig.02). Each segment was analyzed in the lengthwise section in correlation with morphological parameters like building height and width of the road (Fig.05). Finally, these values were combined in a map that showed the total vibrancy of the ground level.

Lastly, the availability of spatio-temporal data for Poblenou offered the opportunity to obtain accurate information on daily human activities and movement patterns. Three main data sources were used in the current study: (1) Social media data, (2) GPS-related data, and (3) On-Site observations.

Social media data provided information on how people experience the area and the places they share with their network. GPS data identi-



Fig.4 - Built environment and ground-level vibrancy levels - Source: Author, 2021 - data source OSM, Open-DataBCN

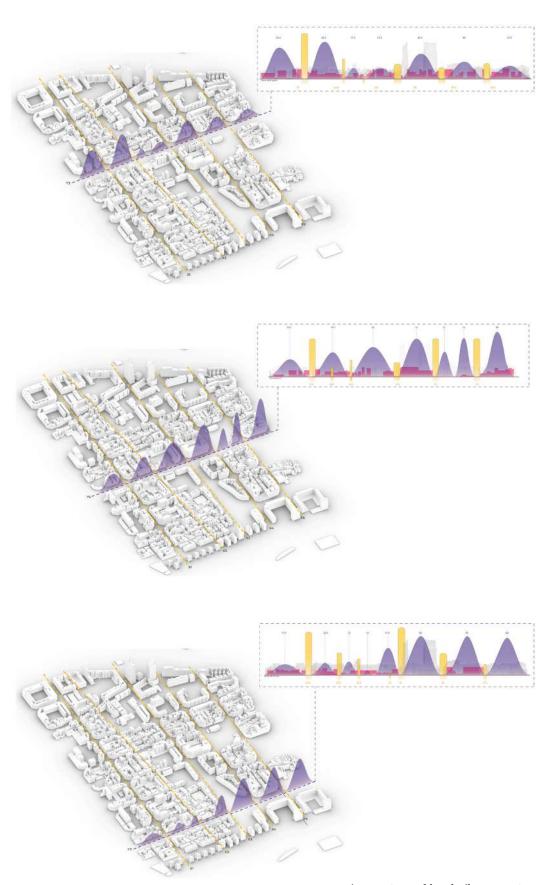


Fig.5 - Ground level Vibrancy - Source: Author 2021

fied movement patterns in a specific spatio-temporal context. The densities of these data were used as indicators for the total value of vibrancy in Poblenou. In addition, the on-site observations of the area were carried out at different times and days of the week. These provided more detailed information regarding people's experience of Poblenou and a validation metric regarding the results of the data analysis.

Development

The combination of all these maps into one density grid map presents the total urban vibrancy levels of Poblenou (Fig.06). The area was divided into an AxBm grid where each pixel of the grid would provide a subarea that could be an adequate sample of urban vibrancy and adequate enough for interventions. Especially for the block density metric, the target was to identify the areas that contain narrow streets that create small or medium blocks as they are an indicator of a vibrant urban environment(Li et al, 2020).

The most and least vibrant areas led to the development of a catalog of solutions which included among others, the extension of ground floors, the repurposing of inner courtyards, and the reconfiguration of narrow streets.

Phoenix Platform

The final step is the creation of an inclusive digital platform that invites all the design experts to use it as a digital toolkit for urban vibrancy and all the non-experts to use it as a tool for more active and dynamic participation.

For the technical team members, the analysis and visualization tool-kit provided all the layers used in the analysis. Each layer visualized the vibrancy level per grid pixel and informs on how the total amount is divided in vibrancy of the built environment and in vibrancy of the ground level (Fig. 07). The proposals or ongoing projects submitted to the platform are given the option to re-evaluate the urban vibrancy levels that would occur after their implementation. In this way, each solution is linked to the expected new scores of urban vibrancy which leads to more data-informed decisions.



Fig.6 - Total urban vibrancy levels, Source-Author 2021 - data source: OSM, OpenDataBCN

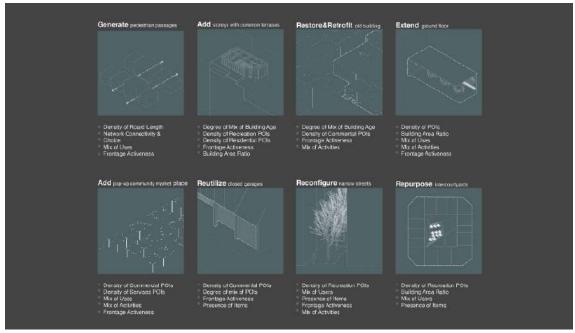


Fig.7 - Catalog of Urban Interventions for the neighborhood of Poblenou -Source: Author, 2021

Phoenix platform is also open to all non-expert community members, to actively participate in the process. There is an exclusive space where they can explore the urban vibrancy levels of each area, the catalog of solutions with the re-evaluated vibrancy levels, and check the progress of ongoing projects for their neighborhood. In addition, they can highlight proposals to be implemented in their local area, vote for their favorite ones, or leave their comments. In this way, decision-makers get feedback from the local residents on the proposals, and citizens can become active participants in the changes of their local environment.

Conclusion & discussion

Today, there is growing attention toward new forms of citizen participation in the urban development processes. Compared to traditional methods, the use of digital tools can offer citizens more active participation in the process. However, a flexible and collaborative environment where data are open and accessible is required and citizen feedback is considered an important and valuable input for the design of such tools.

Furthermore, urban vibrancy is considered an essential element of sustainable urban areas and is connected with urban form and socio-economical activities. Is linked with a plethora of benefits such as democratizing the spatial layout of local activities, encouraging social interactions and improving the quality of urban daily life. In order to facilitate the design of a more vibrant and sustainable urban environment is important to engage all agents in the process. The encouragement of this synergy and the development of relevant digital tools is essential for the future design process.

The methodology proposed in this paper aims to bridge various aspects of urban participatory planning; bring together all agents of an urban environment, inform them on the ongoing projects and help design experts enrich their ideas with more data-informed solutions and feedback from the local community.

Phoenix project explored how a digital platform could activate participation between all agents of an urban environment. A methodological approach was provided along with the case study of Poblenou on



Fig.8 - Percentage analysis of the total value of urban vibrancy - Source: Author, 2021



Fig.9 - Community members space-Source: Author, 2021

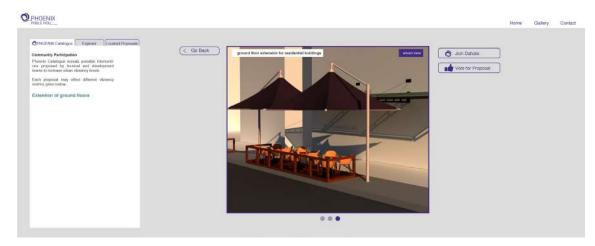


Fig.10 - Community members space-Source: Author, 2021

how to create an open collaborative digital toolkit that promotes urban vibrancy.

Challenges for the project still exist. The inflow of user-supplied information should be as clean and representative as possible. It is essential to make sure that the pool of non-expert residents providing feedback on projects does not suffer from selection bias, as this can potentially cause systematic misrepresentation of the affected community. It is, therefore, crucial that everybody in the community is aware of, and willing to engage with the platform. Different community outreach campaigns and potential incentivization schemes can be explored as well as data-scientific methods of evaluating the representativeness of the participating sample.

In addition, the grid definition and the proposed point system is something that could be re-explored, depending on the study area that is expored. The grid could be scaled for more high-level or granular results and the simple point system proposed in this paper could be enriched with more indicators as well as negative values. In conclusion, while limitations and avenues of impovemnt still exist, once tackled, the Phoenix methodology can potentially be applied in smaller or bigger urban areas addressing different urban challenges.

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Measuring the quality of streets as open public spaces in the city center in Belgrade, Serbia

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Abstract

The quality of the environment is of vital importance for urban areas, and streets and squares, as the specific form of open public space, represent an essential part of the city. In urban areas, total road traffic kilometres will grow by 40 % between 1995 and 2030. This particular research focuses on the secondary streets that represent an integral part of a city center not only in a functional way but also in a formal, structural and cultural sense.

The research aims to analyze the overall quality of urban streets in the center of Belgrade. The paper represents the segment of the research done alongside approximately 500 students from the University of Belgrade, Faculty of Architecture, as a part of the teaching course entitled: Urban Design of Open Public Space as the research polygon of more than 100 streets from the central urban borough in Belgrade were chosen. The principal methodology is based on the Criteria & Indicators network analysis, with five selected quality criteria: safety, comfort, accessibility, readability, and liveability.

Results of the research represent the quality assessment of streets, identifying specific problems and potentials in the context of open public space in the city center. Therefore, one of the expected contributions of the paper are the guidelines and knowledge base for upgrading the pedestrian network and urban design of open public space – the streets in Belgrade's inner historical city center, thus improving the overall quality of life.

Keywords

urban streets, quality assesment, city center, urban design, Belgrade.

Introduction

The quality of the environment depends on the quality of open public space. In urban areas, one of the main types of open public space are streets. The street, as a public space, defines the common and exceptional elements of the city's urban layout. There are different shapes and forms of the street in a city. It can vary from highways to one-way streets integrated in the urban matrix. In residential areas the streets represent an integral part of everyday life. This is mostly characteristic for the historic parts of European cities¹, where the quality of streets influences the overall quality of urban life³.

This particular research focuses on the secondary and residential streets in the historic part of Belgrade. In this paper we will present the overview of the research conducted during the educational course at the University of Belgrade, Faculty of Architecture. The aim of the research is to analyze the overall street quality and to determine the main problems and potentials regarding formal and functional characteristics of residential streets in Belgrade.

The quality of streets is a rather abstract concept that cannot be easily defined. Different authors tried to tackle this issue by identifying the specific characteristics that influence the quality of streets, as part of the open public space. Several research studies suggest how urban streets with lower frequency of traffic, pedestrians and vehicle have a higher quality4. American Planning Association suggested several qualitative characteristics for urban design of open public space: social inclusion, urban safety, local cultural identity, participation and good maintenance5. Gehl (2008) analysed the behaviour, habits and movement of users in urban streets. He pointed out the two main preconditions for good open public space: protection and comfort⁶. Mehta (2013, 2014) created the index for empirical evaluation of the quality of streets, which are based on the: inclusiveness, sensitivity, safety, comfort, and overall user satisfaction⁷⁸. In the book *Urban design of public space* (2021) Đukić gives an important overview of the criteria regarding the quality of streets: safety, comfort, accessibility, readability, and liveability9. Safety is one of the first and most important aspects regarding quality of open public space. It can be observed within different modes of traffic and transportation, the protection from violence and crime and unpleasant experiences¹⁰. Comfort is a complex phenomenon and by providing comfort in open urban space we enable pleasant usage of the space. It is characterised by the presence of natural elements, such as greenery, water or natural and soothing sounds, and sunlight¹¹¹². Also, the design elements define the comfort. Interesting different material and colours, as well as protective structures that provide protection from the rain and wind or provide shading during the summer heat can influence the overall comfort of users in the street. Additionally, comfort in open public space includes different aspects: thermal comfort, acoustic comfort, air and noise pollution, space capacity and maintenance¹³ ¹⁴. Accessibility and Readability present a basic precondition for adequate usage of streets. Accessibility refers to the level of pedestrian and vehicle access, with the focus on inclusivity of all categories of users¹⁵. The overall accessibility relies on different physical characteristics of space, ranging from the connections to urban matrix of streets and the access to the public transportation to the specific elements of universal design, concerning pavement and urban mobiliar of the street¹⁶. Readability helps orientation for all users in different modes of transportation, especially when visiting an unfamiliar area. The readability is defined by users' perception of the environment and is closely connected to the identity and character of space. It depends mainly on the signalization, but also on the specific spatial features and urban landmarks¹⁷. The *Liveability* of street depends on the users, on the density, the frequency of users in residential zones and the social interaction of users18 19 20 21. Features that enable liveability are different activities in the street followed by the attractiveness, ambient and identity of space²² ²³. Based on these criteria the specific methodology for the paper was established.

Methodology

The paper represents the segment of the wider research done during several years, alongside approximately 500 students from the University of Belgrade, Faculty of Architecture, as a part of the teaching course entitled: *Urban Design of Open Public Space*. In this research more than 100 streets from the central urban borough in Belgrade were analysed. For the purpose of the paper the case study of Vračar Municipality was chosen, as one the historic municipalities in Belgrade, and one with the

highest density. In total, eight different streets in this municipality are presented, divided into two categories. Streets were divided into categories in order to compare the two main types of streets in the Vračar Municipality. Each category contains four streets with difference in formal and functional characteristics. Category 1 includes four main, long, wide and important streets, with high frequency of users and variety of functions: Krunska street, Kralja Milana street, Bulevar Kralja Aleksandra and Dalmatinska street. Category 2 contains four narrow and strictly residential one-way streets with low frequency of users: Vladetina street, Branka Radičevića street, Čelopečka street and Grčanička street.

Quality assessment of the streets was based on the aforementioned theoretical research with predefined set of criteria. The Criteria & Indicators network analysis included five quality criteria: C1 - safety, C2 - comfort, C3 - accessibility, C4 - readability, and C5 - liveability. The level of satisfaction with each criterion was observed and elaborated. Additionally, for every criterion a grade was awarded using the 5-point Likert scale - a type of psychometric response scale in which the overall level of satisfaction is presented typically in five points scale, from the lowest level of satisfaction (grade or point 1) to the highest (grade or point 5): (1) very dissatisfied; (2) dissatisfied; (3) neutral (4) satisfied; (5) very satisfied. Firstly, the results for each case study are presented, then the overall average grade for the five criteria and finally, the comparation between two categories of streets is given in a form of a table.

Results

The case study and the research polygon included residential streets in the Municipality of Vračar in Belgrade, Serbia. With an area of only 291 hectares, it is the smallest of all Belgrade's (and Serbian) municipalities, but also the most densely populated²⁴. According to the 2011 census results, the municipality has a population of 56,333 inhabitants. Vračar is one of the three municipalities that constitute the very center area of Belgrade, together with Savski Venac and Stari Grad. It is an affluent municipality, having one of the most expensive real estate prices within Belgrade, and has the highest proportion of university educated inhabitants compared to all other Serbian municipalities²⁵. The streets in this municipality are mainly residential, with recrea-



Fig.1 - Elements of urban streets in historical center of Belgrade, the Vračar Municipality, Source: Au-thor 2021

tional and cultural functions such as city parks, embassies, and museums in the proximity (Figure 1). The two main categories of streets in Vračar are presented in detail in the following text.

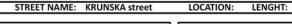
Category 1

01. Krunska street

Krunska street is one of the most beautiful streets in Belgrade. It is located in the historic core of the Vracar Municipality and is 1200 meters long. Many cultural heritage buildings are located in this street, as well as significant residential architecture buildings. Residential buildings are oriented towards the street, with windows facing each other, thus representing the mode of surveillance. Additionally, there are three embasys with high security in this street. Potential safety problems are unsecured and dark passages between the building. The significant parts of this residential street lack greenery or parks. Also, because of the high buildings and high density, the insolation and wind is low, making the street uncomfortable for walking during the summertime. Parking space consumes large amout of the street space. The street contains clear signalization, which makes it is easy to navigate. Vistas and urban landmarks make this street recognisable and enable good orientation. Low intensity of greenery and parks, and no facilities for laisure and recreational acitivities present the main problems regarding the overall quality of the street (Figure 2).

02. Kralja Milana street

Kralja Milana street i one of the central streets in Belgrade, 940m long. The magnitude of the street and the residential buildings in the street with the commercial use and shops in the firts floors ensure an active usage and high frequency of users, making this a rather safe street. Additionally there are no unseured passages between the buldings. There is greenery on both sides of the street, but it is not well-maintained, and because of the high frequaancy of cars and ususal traffic jams twice per day, the polution is present, especially the noise polution. This represente the main issue of the street quality, regarding the overall comfort aspect. The position and magnitude of the street is making it easier for users to locate it, and it is well connected with the public transportation. The street contains very clear and sufficient sig-



Criteria 1: SAFETY

Residential buildings are oriented towards the street, with windows facing each other, thus representin the mode of survalience. Additionally, there are three embasys with high security in this street.



dark passages be-



Criteria 2: COMFORT

There are significant parts of this residential street that lack greenery or parks. Because of the high buildings andhigh density the insolation and wind is low, making the street not as comfortable for walking. There are not additional features in the street that would make people spend more time in the street





The sidewalks are accessible for all categories of users, and there are elements of inclusive urban design.

parking space consumes large amout of the street space but are well organised, with several spaces for disabled.



3,8

Criteria 4: READABILITY

The street containes clear signalization and adequate traffic signs. One way street is easy to navigate. The position of the street is linear and has a continuity. Vistas and urba landmarks make this street recognisable.







Criteria 5: LIVEABILITY

The street has low intensity of greenery and parks, and there are no facilities for laisure and recreational acitivities, such as coffe places and parks, therefore the users are only passing by. The frequency of cars is low, and the



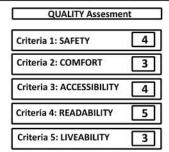


Fig.2 - Results of quality assesment analysis for the Krunska street Source:

OVERALL grade

STREET NAME: KRALJA MILANA street

Criteria 1: SAFETY

LOCATION:

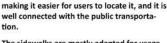
Criteria 2: COMFORT

LENGHT:

The magnitude of the street and the resi-There is greenery on both sides of the dential buildings in the street with the comstreet, but it is not well-maintained. mercial use in the firts floors ensurance an Because of the high frequaancy of cars active usage and high frequency of users, and ususal traffic jams twice per day, the making this a rather safe street. Additionaly polution is present, especially the noise the re are no unseured passages between

Street elements for pedestrians are present, and the pavement is lacking parts with low greenery.





The position and magnitude of the street is

Criteria 3: ACCESSIBILITY

The sidewalks are mostly adapted for usage of every user category, while there are no ramps in the building entrances.











Criteria 4: READABILITY

The street contains very clear and sufficient signalization and adequate traffic signs. The central location, lenght and urban landmarks, such as the largest and most important roundabaut "Slavija" make this street recognisable









Criteria 5: LIVEABILITY

The coffee places, restaurants and shops that are in the ground floors and the position of this street makes it vibrant with people throughout the whole day.











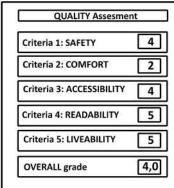


Fig.3 - Results of quality assessment analysis for the Krallja Milana street Source: Author 2021

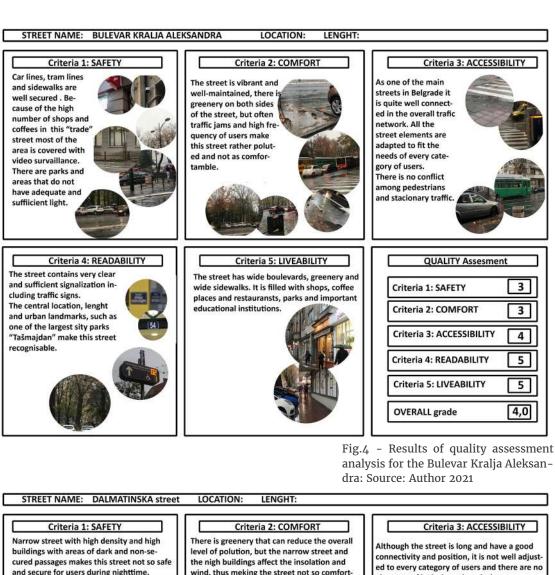
nalization and adequate traffic signs. The central location, lenght and urban landmarks make this street recognisable. The sidewalks are are wide and mostly adapted for every user category, while there are no ramps in the building entrances. The coffee places, restaurants and shops that are in the ground floors and the position of this street makes it vibrant with people throughout the whole day (Figure 3).

03. Bulevar Kralja Aleksandra

Bulavar Kralja Aleksandra is one of the most important streets in Belgrade and second longest street (length is 7,5km), with several diferente types of transportation. Car lines, tram lines, bike and pedestrian lines are well secured. Because of the high number of shops and coffees in this "trade" street most of the area is covered with video survaillance. However, there are parks and passages that do not have adequate and sufficient lightning, which presente a safety issue in this street during nighttime. The street is vibrant and well-maintained, there is greenery on both sides of the street, but often traffic jams and high frequency of users make this street rather poluted and not as comfortamble. As one of the main streets in Belgrade it is quite well connected in the overall trafic network. All the street elements are adapted according to the principles of The street contains very clear and sufficient signalization including traffic signs. It is filled with shops, coffee places and restauransts, parks and important educational institutions. The central location, lenght and urban landmarks, such as one of the largest sity parks "Tašmajdan" make this street recognisable and livable (Figure 4).

04. Dalmatinska street

Dalmatinska street is located in two Belgrade municipalities and is 1200 meters long. However, narrow street with high density and highstory buildings and dark and non-secured passages makes this street unsafe for users during the nighttime. There is greenery in the proximity of the street, but the height of buildings affect the insolation and wind, thus making the street not so comfortable for longer usage. Although the street is very well conected to the public transpotration lines, there are no elements of inclusive urban design, which present na acessibility problem. The signalization in the street is present, but not









QUALITY Assesment

Criteria 1: SAFETY 2

Criteria 2: COMFORT 3

Criteria 3: ACCESSIBILITY 2

Criteria 4: READABILITY 3

Criteria 5: LIVEABILITY 4

OVERALL grade 2,8

Fig.5 - Results of quality assessment analysis for the Dalmatinska street Source: Author 2021

sufficient for tourists and non-citizens. There are however several. important landmarks in the proximity of the street. The street livability is different on the right and left side of the street, while the facilities and activities are on the left, there are significantly less users on the right side of the street (Figure 5).

Category 2

05. Vladetina street

Vladetina street is 300 meters long. One of the main issues in the street is conflict between the pedestrian and private transportation. Sidewalks are used for parking, and there is a lack of artificial lighning, which makes the users unsafe during nighttime. The grenery is presente in the street, but the noise pollution is present and the overal aestetics of the street i slow. The street has narrow and damaged sidewalks, and no bike lanes, and there are no ramps and elements of universal design. Also, it is not easy accessible for users travelling by public transportation. Other than a few coffee places and a kindergarten, there are no important urban landmarks that could help better orientation in the street. However, one of the major issues regarding this street is (non)livability. While there are cars parked on the sidewaks, the graffiti and damaged street elements, as well as the lack of interesting facilities that could generate user activity, the street has a very low level of livability (Figure 6).

06. Branka Radičevića street

Branka Radičevića street is a small street only 200 meters long. Safety issues represent a significant problem in this street due to the very narrow sidewalks that are mainly used for parking. There are no security cameras and no adequate artificial lightnning. Therefore, the percieved sense of safety is very low during the daytime and the night-time period. There is a significant lack of greenery in the proximity of this street. The pavement, urban mobiliar and the street facades are in rather bad condition, which contributes to overall low levels of attractivness. Also, the construction in the street produces noise pollution and there is a lack of insolation during the day. The street is a one-way, local street that is not an integral part of the city street network. The lack of parking space is evident and there are no ramps and elements of

STREET NAME: VLADETINA street

Criteria 1: SAFETY

There is conflict between the pedestrian and private transportation. Sidewalks are used for parking, and there is a lack of artificial lighning, which makes the users unsafe during nighttime. There are graffiti on the walls and the video survaillance is present only on the entrances for private companies.



Criteria 2: COMFORT

There is greenery in the proximity of the street, while the street is coverd with concrete pavement. Insolation levels are low. Building terraces are oriented towards the street, that generate polution, thus making it not so comfortable to use. The street is well-maintained but the aestetics of the street is low.



Criteria 3: ACCESSIBILITY

The street is part of the traffic network, but not as easy accessible for users travelibg by public transportation.

The street has narrow and damaged sidewalks, and no bike lanes, while there are no ramps and elements of universal design.



Criteria 4: READABILITY

The orientation in this street is not easy, because the there are only a few signs and no information labels. Other than a few coffee places and a kindergarten, there are no important urban landmarks that could help better



Criteria 5: LIVABILITY

One of the major issues regarding this street is (non)livability. While there are cars parked on the sidewaks, the graffiti and damaged street elements, as well as the lack of interesting facilities that could generate user activity, the street has a very low level of livability.



QUALITY Assesment

Criteria 1: SAFETY

Criteria 2: COMFORT

3

3

2

Criteria 3: ACCESSIBILITY

Criteria 4: READABILITY 2

Criteria 5: LIVABILITY 1

2,2 **OVERALL** grade

Fig.6 - Results of quality assessment analysis for the Vladetina street Source: Author 2021

STREET NAME: BRANKA RADIČEVIĆA street

Criteria 1: SAFETY

Safety issues represent a significant problem in this street due to the very narrow sidewalks and the conflict between the pedestrian and parking. There are no security cameras and no adequate artificial lightnning. Therefore the percieved sense of safety is low during the nighttime period.



Criteria 2: COMFORT

There is a significant lack of greenery in the proximity of this street. The sidewalks are narrow and in the general bad condition, as well as the complete street pavement and the facade of the buildings, which contributes to overall low levels of aestetics. Also, the construction in the street produces noise pollution and there is a lack of insolation during the





Criteria 3: ACCESSIBILITY

The street is a local street that is not an integral part of the city street network. Formal elements like sidewalks and pavement is unadequate for the pedestrian users. The lack of parking space is evident and there are no ramps and elements of universal design.







1

Criteria 4: READABILITY

Although the street is short the orientation in this street is not easy because there are just a few traffic signs and there aro no important urban landmarks that could help better orientation in the street.



Criteria 5: LIVABILITY One of the major issues regarding this street

is (non)livability. The overall low aestetics and condition of the street pavement and buildings, noise pollution and construction work affect the livability. However, there is a small park in the proximity of the street, that bring young users to this area.





QUALITY Assesment 1 Criteria 1: SAFETY

Criteria 2: COMFORT 1 Criteria 3: ACCESSIBILITY

Criteria 4: READABILITY 2

Criteria 5: LIVABILITY 2

1,4 **OVERALL** grade

Fig.7 - Results of quality assessment analysis for the Branka Radičevića street Source: Author 2021

universal design. The overall low aestetics and condition of the street, noise pollution and construction work affect the livability. However, there is a small park in the proximity of the street, that bring young users to this área (Figure 7).

07. Gračanička street

Gračanička street is a small one-way street in the Vračar Municipality, and it is only 200 meters long. This one-way street has narrov sidewalks, but wide traffic lines for vehicles. However, there are passages with the good artificial lightning. There is linear greenery in the street, but not enough natural insolation. Noise from the street is noticable and affects the comfort in the street. One of the main issues in this street is accessibility for every uswer category. There are no stations for public transportation in the proximity of the street. Pedestrian passages are not noticable, and there are no ramps in the building entrances, and no other elements of universal urban design. Also, the signalization in the street is rather poor. However, the biggest Belgrade church "Hram Svetog Save" is visable from this street making it easier for orientation. Although there is lack of natural sunlight during the day, the greenery and local coffee places make up for the livability of the street (Figure 8).

08. Čelopečka street

Čelopečka street is a narrow one-way street in Vračar Municipality 200 meters long. The narrov sidewalks and no surrvailance affect the safety in the street. However, the main issues regarding the quality of this street are comfor and accessibility. There is a lack of greenery, urban mobiliar and natural insolation. The narrow passages and sidewalks, followed by construction work noise make this street rather non comfortable for users. Additionally, the street is a local street one-way street that is not easily acessible by car or the public transportation. Formal street elements such as narrow sidewalks and pavement is unadequate for the pedestrian users. There are no ramps and elements of universal design. Signalization is rather poor and there are no important urban landmarks that could help better orientation in the street. The steet lacks greenery and comercial or cultural features. The users are just passing by this street without any other activity in this street.

STREET NAME: ČELOPEČKA street

Criteria 1: SAFETY

The narroy sidewalks and no surryailance in the street. However, the passages are visible and the artificial lightning in the street is ase



Criteria 2: COMFORT

There is a lack of greenery, urban mobiliar and natural insolation. The narrow passages and sidewalks, followed by construction work make this stret rather non comfortable for users.





Criteria 3: ACCESSIBILITY

The street is a local street one-way street that is not easily acessible by car. Formal elements like narrow sidewalks and pavement is unadequate for the pedestrian users. Additionall issue is a construction site that make certain part of the street almost completly unaccessible. There are no ramps and elements of universal design, or public transportation







Criteria 4: READABILITY

Signalization is rather poor and the orientation is not easy.

There aro no important urban landmarks

that could help better orientation in the street.



Criteria 5: LIVABILITY

The steet lacks greenery and comercial or cultural features.

The users are just passing by this street without any other activity in this street. The local shops are closed.





QUALITY Assesment				
Criteria 1: SAFETY	2			
Criteria 2: COMFORT	1			
Criteria 3: ACCESSIBILITY	1			
Criteria 4: READABILITY	3			
Criteria 5: LIVABILITY	2			
OVERALL grade	1,8			

Fig.8 - Results of quality assessment analysis for the Gračanička street Source: Author 2021

STREET NAME: GRAČANIČKA street

Criteria 1: SAFETY

This one-way street has narrov sidewalks , but wide traffic lanes. The street has passages with the good artificial lightning. These is noorganized surrvailance.



Criteria 2: COMFORT



There is a certain greenery and urban mobiliar but not enough natural insolation. Noise from the street is

noticable as well as the

air pollution.





Criteria 3: ACCESSIBILITY

The street is a local, one-way street. There are no stations for public transportation, pedestri-

an passages are not noticable, and there no ramps in the building entrances.





3



Criteria 4: READABILITY



Signalization is rather poor However, the biggest Belgrade church is visable from this street making it easier for orientation.





Criteria 5: LIVABILITY





Although there is lack of natural sunlight during the day, the greenery and local coffee places make up for the livability of the street.



QUALITY Assesment

Criteria 1: SAFETY

Criteria 2: COMFORT 2

Criteria 3: ACCESSIBILITY 1

Criteria 4: READABILITY 3 Criteria 5: LIVABILITY 3

2,4 **OVERALL** grade

Fig.9 - Results of quality assessment analysis for the Čelopečka street Source: Author 2021

The local shops that were crucial parto f the street are now closed (Figure 9).

The overall assessment of the street quality, based on the presented results for each street is given in the Table 1, and the comparation between the two categories of streets is given in the Table 2.

In this section the results of the study were presented and elaborated, and in the next section the discussion of the results is presented.

Street/criteria	C1	C2	C3	C4	C5	avg.grade /
1. Krunska street	4	3	4	5	3	streets 3,8
2. Kralja Milana street	4	2	4	5	5	4,0
3. Bul. K. Aleksandra	3	3	4	5	5	4,0
4. Dalmatinska street	2	3	2	3	4	2,8
5. Vladetina street	3	3	2	2	1	2,2
6. Branka Radičevića street	1	1	1	2	2	1,4
7. Čelopečka street	2	1	1	3	2	1,8
8. Gračanička street	3	2	1	3	3	2,4
av. grade / criteria	2,75	2,25	2,37	3,50	3,12	<u>2,8</u>
	[

Table 1: Quality assessment for the chosen streets in Vračar Municipality, source: the authors. 2022.

Criteria/st.category	Street Category 1	Street Category 2
C1 - Safety	3,25	2,25
C2 - Comfort	2,75	1,75
C3 - Accessibility	3,50	1,25
C4 - Readability	4,50	2,50
C5 - Livability	4,25	2,00
C1+C2+C3+C4+C5	3,65	1,95

Table 2: Average grade for each criterium divided by street categories, source: the authors. 2022.

Discussion and conclusions

The research result showed the quality assessment of the residential streets in the historic part of European cities, on the example of Belgrade, Serbia. The analysis was conducted among the eight residential streets in the Municipality of Vračar – the historic center of the city. The quality evaluation was based on predefined set of criteria: safety,

comfort, accessibility, readability, and liveability. The overall score for all the streets according to these five criteria is 2,8 (Table 1). This suggests that there are certain issues regarding the overall quality of streets. The main problems were observed from the aspects of comfort (average grade 2,25/5) and accessibility (average grade 2,37/5) (Table 1). Three is noticeable lack of natural elements in the proximity of the streets, such as greenery and insolation, due to the high density in the Municipality. Also, narrow sidewalks of the majority of the streets are being used for parking and there is a lack of elements of universal design, which present a major problem for users. Concerning safety (average grade 2,75/5), the main issues were related to the night-time usage, because of the lack of surveillance and artificial lightning in the entrances and passages between the buildings. Although liveability got a higher average grade in comparison to other criteria (3,12/5) there is still the lack of activity that promotes or generate social inclusion and communication along the streets. Also, several construction sites on the location proved to lower the overall liveability scores. The highest average grade out of all criteria (3,50/5) was pointed to readability, suggestion that overall orientation and signalization of the streets is satisfactory (Table 1). However, there is a rather significant difference in the scores of quality assessment between the two categories of streets. The streets in the category 1 got the higher overall score (3,65) than the streets in the category 2 (1,95/5). That is the situation for every individual criterium (Table 2). In contrast to some previous research, results of the study argue how the streets with the higher frequency of users and traffic turns out to have a higher quality score. Additionally, the streets in the category 1 are wider, longer, and have more greenery and parks. These streets turned out to be safer and more accessible (Table 2). One of the main differences between these two categories of streets is regarding the criteria of liveability. The higher frequency of users creates the possibility for social interaction and recreational and leisure activities. We can conclude that the quality of street depends very much on the level of activity in the street.

This research could serve as a platform and a knowledge base for future research on guidelines for upgrading the quality of residential street in city center, thus improving the overall quality of life.

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Legibility vs. readability – Between transport planning and pedestrian behaviour

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Abstract

Pedestrian behaviour is defined by a significant number of factors, but the readability of space is one of the key prerequisites for observation and all other pedestrian activities. The focus of the paper is on the relation between legibility and readability.

By analogy space with the written text, legibility is focused on small parts and signs, while readability is based on the whole and on associations, that are emerging in our minds with possible common space usage scenarios. This paper tries to divide which urban elements affect legibility, and which one on readability for pedestrians to help transform networks in neighbourhoods between transport planning and pedestrian behaviour.

Interesting areas for analysis are overlaps of pedestrian and road traffic. So, the study area is mega blocks in New Belgrade – block 23 and block 30, especially the parts of the pedestrian network. This approach starts by identifying key elements of legibility and readability and analysing how the road traffic affects the pedestrian network and supported activities in mega blocks.

The methodology consists of forming evaluation criteria based on literature review and examining it in the study area through behavioural observations. After the assessment and analysis are done, the results as the elements in two groups of perception data can contribute to guidelines for redesigning the space in the function of pedestrian movement.

Keywords

pedestrians, legibility, readability, evaluation (criteria), (urban) elements

Introduction

Walkability is important for the sustainable development of cities. However, increase of share of trips by foot provides environmental, economic and health benefits. Walkability requires well-connected street networks that provide direct, efficient routes linking origins and destinations.¹ 'Walkability' measures the quality of walking conditions in a street, neighbourhood, or city, from the physical efficiency of a place to the perception of an individual who is walking. So, the factors that define a space as walkable are not limited to the physical dimensions of a place but also include perception.² In the literature on walkability, only one dimension is included: physical or perceptual but, rarely both. In this paper, there will be considered both, physical and perceptual walkability, i.e. relationship between activity, intensity or movement on one side and environmental cognitive processes while walking on the other side.

Previous pedestrian space construction has mainly focused on the settings of street sections, neglecting the facilitation of network connections or nature and characteristics of the users themselves. Also, the spatial orientation is crucial, because the current complex city-street systems often make it difficult for people to find their way to destinations.³

Combining the different factors is important because, from a psychological view, two components which play a part in the process of reading an environment or obtaining spatial information are the characteristics of the space and the characteristics of the observer.⁴

The research questions are regarding elements that contribute to a pedestrian-friendly environment and the terms of legibility and readability. This research tries to define which elements of the environment affect legibility, and which one on readability for pedestrians to transform networks in neighbourhoods between transport planning and pedestrian behaviour.

The assumptions are made by analogy with the written text. Legibility would only show the perception of the spatial structure, and the readability includes the recognition of potential usage scenarios, thus ensuring the "text" attractiveness or interest to the reader; or it can be said that based on associations, that are emerging in our minds with

possible common space usage scenarios.5

This paper aims to define and examine the affection for legibility and readability and form guidelines for redesigning the space for the function of pedestrian movement. It starts with the literature review section identifying concepts from walkability to legibility and readability to form evaluation criteria, then outlines the methodology. After that, a discussion of the results and analyses are presented through behavioural observations followed by a comparative analysis and conclusions with guidelines.

Literature review

The walkability concept was studied in three main topics in the literature. The first topic focuses on the physical conditions of walkable places or basic components of a walkable environment, the second one focuses on the perceptions and thoughts of pedestrians about their environment, and the third one on the relationship between physical and psychological health and walking as physical activity. The focus of this paper is on the second topic, especially on the relationship between activity and spatial cognition to define elements of legibility and readability of space.

There are several approaches to reconsidering the legibility and readability of space and in the text those from environmental psychology of Kevin Lynch's and Gordon Cullen's theories will be presented.

Environmental psychology focuses on a psychologically acceptable environment – an environment in which a human chooses to live and has a freedom of choice. Four characteristics of the psychologically acceptable environment are coherence, complexity, mysteriousness, and legibility, where legibility means that the spatial environmental configuration is easily perceived. Also, it can be seen as the basis for the expression of the other three attributes.⁷

"The Image of the City" by Kevin Lynch is a model that is closely related to urban landscape readability. It identifies elements of a conceptually perceived city's physical body (paths, nodes, landmarks, edges, and districts) that can, in principle, be interpreted as archetypal elements of the city's "text" perception.⁸

Gordon Cullen's concept of perception is based on how the human conscience structures the city landscape from the "inside", i.e. by

"moving" or walking through it. Based on this theory, the relationship between the "here" and "there" is the essential link that describes the urban landscape structure. Furthermore, the connection between these two terms leads to legibility or even readability of the environment. "Here" is an area in which an observer is at a certain time (known and visible), "there" – an area in which he or she can move (it can be both visible and invisible). The most important perceived spaces form the "lifeline"– functionally and compositionally distinguish the backbone of the city or its part in the environment, which can be named as the most legible part of the city. That part is associated with Lynch's concept of a mental mapping and city image, especially with elements of paths, landmarks, and nodes. In this paper, those elements of "lifelines" will be searched in pedestrian networks of mega blocks.

Regarding the psychological aspect, the internal strategies for making decisions have a bigger influence than external factors or stimuli. This quote describes it more:

Despite the conscious nature of perception, the process of perceiving space is both influenced by the background of the subject and by unconscious subjective factors. The output (verbal expressions or behaviours) is highly subjective. The nature of perception relies on a mental "spontaneity" (resembling proprioception) combined with unconsciousness, instinct, needs, and attention.¹⁰

Also, the previous research on legibility and readability of the environment is based on relations between visibility and positions of semi-private spaces on walking routes, and also the interaction between pedestrians and open spaces on streets. The results show that:

open spaces should be created alongside main streets with high visibility, and the presence of each roadside space should be emphasized using urban design methods, as this will encourage visitors to perform various street activities

- car-parking spaces have a negative effect on legibility
- semi-private spaces with separating elements such as bounda ries, steps, fences, or space under the eaves have a lower effect, but semi-private spaces that are more open to pedestri ans influence attractiveness

- route type with fewer turnings is legible
- semi-private spaces should be concentrated around intersec tions rather than widely distributed along the route¹¹

Method and material

According to the literature review, elements of the environment which can affect the legibility or readability of the walking route are grouped in details or wholes. Table 01 showed which elements would be evaluation criteria and which presence would be searched in space of mega blocks near the paths.

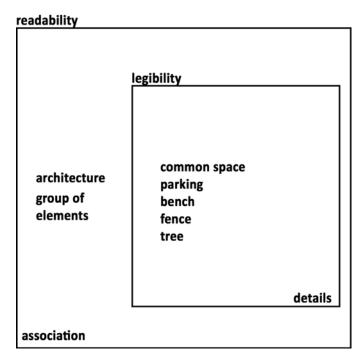


Table.01 - Legibility vs. readability - Evaluation Criteria - Source: Author 2022

The methodological framework of the research is based on two methodologies – behavioural observations activity of usage and walking interviews of respondents to map elements of the environment which can affect the legibility or readability of walking routes in New Belgrade mega blocks.

Behavioural observations

Observation is not simply a question of looking at something and then noting down 'the facts'. Observation is a complex combination of

sensation (sight, sound, touch, smell, and even taste) and perception. Observation involves the systematic viewing of people's actions and the recording, analysis, and interpretation of their behaviour. The researcher can collect the data covertly by hiding their identity or collecting the data overtly.

In this research, these observations will be made as undercover participants where with participant observation, the researcher becomes a member of the group being researched and so begins to understand their situation by experiencing it. Also, the researcher does not disturb the behaviour of other individuals.

Observations can be seen as mapping some behaviour to define patterns. There are, as one a lot of, observations as social and cognitive mapping. Social mapping, for example, is a method concerned with the nature of relationships between people and their social networks. As with most mapping methods, social maps have been used to document and analyse social networks and interactions as well as by those whom they study to gain an understanding of participant perspectives. Social mapping techniques have been used to document social behaviour, movement patterns, and spatial relationships. While cognitive mapping is based on the mutually constitutive nature of place and social relationships. It is important because of understanding how people make sense of the built and historic layers of the natural landscape and the lives that are made possible by such a landscape.²

In this paper, the focus will be on behavioural observation activity on paths of a pedestrian network of New Belgrade mega blocks. There will be shown intensity of usage of each path. Bearing in mind evaluation criteria, the aim is to search for elements of the environment that can affect the legibility or readability of the walking route. There is a hypothesis that spaces with bigger activity are legible and readable.

Walking interview

The focus of the interview is on the relationship between what people say and where they say it – qualitative and quantitative. Interviewees are prompted by meanings and connections to the surrounding environment and it provides richer data than a sedentary interview. Quantitative data concerning the routes taken, as well as qualitative

data derived from the conversational exchange.3

In this paper, this method will be used just as control data for observations. In that sense, the number of respondents and the importance of this data is small but important in forming and controlling the previous methodology of this paper.

The interview was face-to-face as a part of a survey field and it is based on responses from several respondents (about 100) who are passers-by (pedestrians). The survey was simplified to examine legibility, i.e. readability, by asking the users what helped them the most on their way to the destination, i.e. which of the spatial elements most helped to define their current position and orientation in the mega block. The survey and its results try to make an analogy so that good legibility helps in moving towards the destination, i.e. wayfinding, and on the other side readability in the current position and orientation in space.

Study area – mega blocks

The study area included two typical mega blocks of the central zone of New Belgrade. Mega blocks 30 and 23 are similar in size and density, but in different positions. Mega block 30 is located quite close to the quay (Zemun Quay) and large park areas along the river, contrary, mega block 23 is located next to the highway, and near two big constructions – an office building and a Belgrade bus station.

The main reason for the selection of this study area is based on the presence of semi-private or semi-public spaces and the intersection of pedestrian and road traffic, and tendencies of transforming the pedestrian network into wider zones in New Belgrade. ⁴

Results and discussion

Implementing the structure of research discussed above, results of evaluation on the study area of New Belgrade mega blocks will be presented.

Evaluation Results of Mega Block 30

The movement has been realized on two levels. At some points of the path, there are stairs and changes in the level of usage.

There is a bigger pedestrian activity in outer zones of mega-block, especially on walk sides of boulevards where there are about 700 pedes-

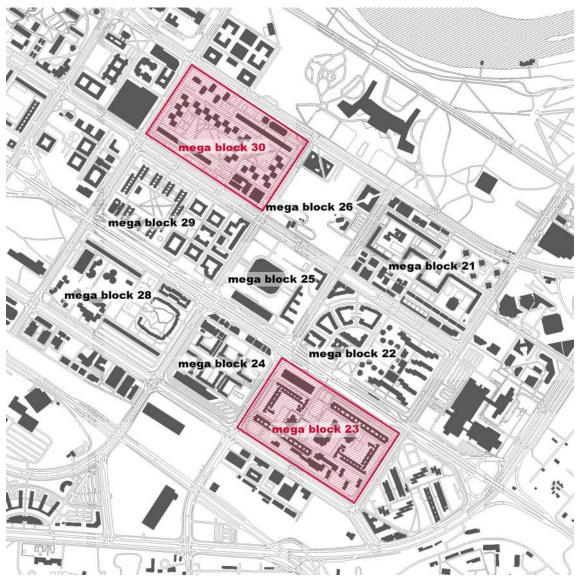


Fig.1 -Map of New Belgrade – Study area include mega block 30 and mega block 23 - Source: Author 2022

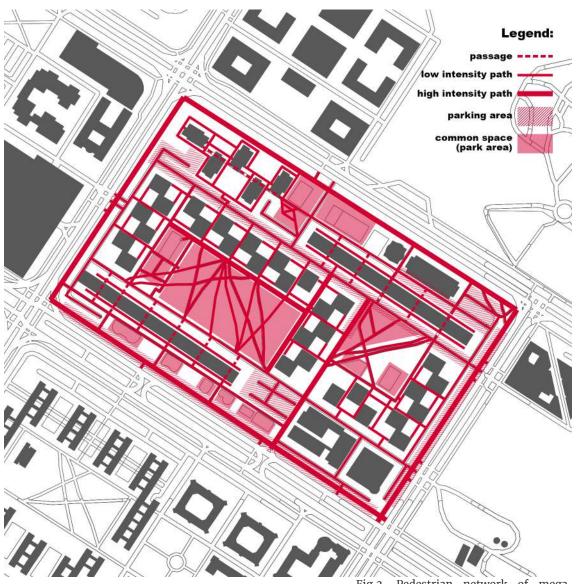


Fig.2 -Pedestrian network of mega block 30 - Source: Author 2022

trian users per day, while in the most used path in the middle of mega block it is about 500 pedestrian users per day. It is because the pedestrian activity is based on facilities outside of mega-block and on big walking distances which users pass by. Bearing it in mind, the connection between a pedestrian network of mega-block and other zones of New Belgrade is so important. So, in which way are those connections made?

According to the result of the walking interview, elements of the environment that affect legibility the most are the small park areas near the paths (36% of respondents) and elements of signage systems, especially number signs (30%) more than text signs (14%). Also, there are marketing signs (about 6%) and other pavements, colours and materials (about 5%). Elements of the environment that affect readability the most are the interesting big marketing sign Coca Cola (50% of respondents) and the large open space in the middle of the mega block (30%). [Charts 1]

Evaluation Results of Mega Block 23

The movement has been realized on the same level, so it is easier to use the space than in mega block 30.

There is bigger pedestrian activity on one part of the outer zone of mega-block, walk sides of boulevards according to new business and shopping district where it is an intensity about 900 pedestrian users per day. Also, big activity is present in some parts of the mega block, such as parks, where there are about 600 pedestrian users per day.

According to the results of the walking interview, elements of the environment that affect users' movement to the destination through the mega block are the marketing signs (about 30% of respondents) and colour (25%) and materials (20%). Also, there are the small park areas near the paths (about 8%), text signs (about 7%) and others. Elements of environment that affect readability the most are the architecture of the mega block (40% of respondents) and the construction site in the mega block (33%). [Charts 1]

Comparative analysis

The comparison of mega blocks has been based on the elements that affect legibility and/or readability of the route while pedestrian user





Fig.3 - Mega block 30: Environmental elements that affect legibility/readability - Source: Author 2022

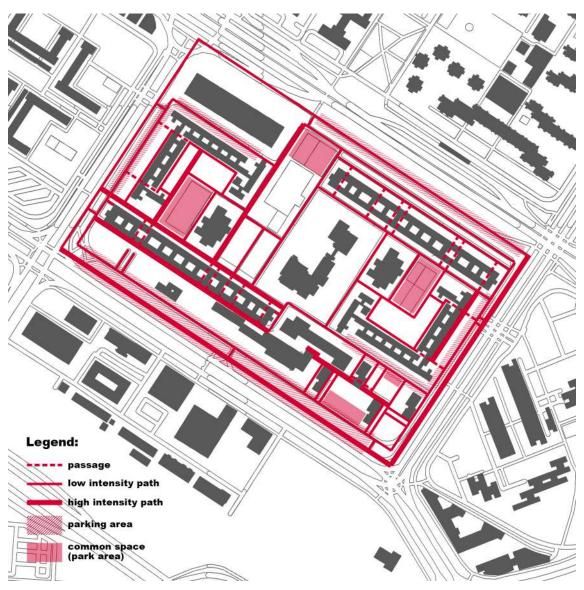


Fig.4 - Pedestrian network of mega block 23 - Source: Author 2022





Fig.5 - Mega block 23: Environmental elements that affect legibility/readabil-ity - Source: Author 2022

walks through a mega block. It can be said that in mega block 30, the legibility of the route is based on the small park areas near the paths as common spaces of the mega block, and elements of signage systems, especially number signs more than text signs, while in mega block 23, the legibility of the route is based on the marketing signs, colour and materials as landmarks, because the signs are smaller than in mega block 30, and it contributes to wayfinding; also colour and materials have more affection in mega block 23 than in mega block 30. When we talk about readability, we can confirm that in mega block 30 large open space does not contribute to legibility, but readability, while it is the opposite in mega block 23. In the middle of mega block 23, there are school and kindergarten facades, materialisation, roofs and windows contribute to the readability of the space in contrast to the edge buildings of the mega block. While in mega block 30, a large open area has potential for future interventions. An interesting fact is that the big marketing sign Coca-Cola definitely contributes to orientation in the mega block, and its readability. The comparison is shown in Charts 1.

Furthermore, in mega block 30, there are more spaces without fences or some kind of edge, which contributes to a bigger influence on visibility and also the readability of pedestrian routes and usage of space. Also, one of the important aspects in this comparison is definitely the enclosure of open spaces, in addition to the mentioned position.

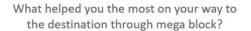
In addition, privatization of space is the biggest difference between mega blocks. Mega block 30 has buildings that are realised during eighties and has no additional reconstructions and new constructiones until nowdays. It also has a large open public place in the middle of the block as a potential for future interventions. Unlike mega block 30, mega block 23 has been reconstructed and realised in etapes and has many privatized spaces, such as tennis courts, playgrounds and others, but also a school and kindergarten with enclosed spaces which do not contribute to the legibility of walking paths.

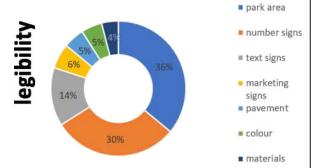
Discussion

The research of the space of mega blocks according to the presented criteria shows that the position, size and ownership of communal open spaces affects legibility and readability of route and that in urban design we should reconsider their position and enclosure during the

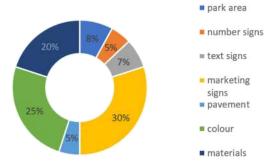
mega block 30

mega block 23

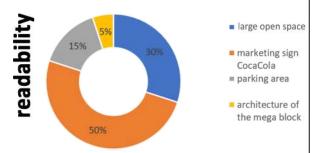




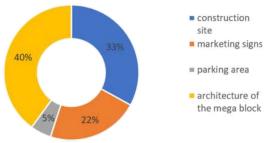
What helped you the most on your way to the destination through mega block?



What helped you the most in your current position and orientation in the mega block?



What helped you the most in your current position and orientation in the mega block?



Charts.01 - Legibility vs. readability -Comparison of results: Mega block 30 vs. Mega block 23 - Source: Author 2022

design process to meet the users' needs. According to the behavioural observations, activity is not the only indicator of legibility or readability of the walking route, because there are some parts of the mega block with a big intensity of activities but with a lack of overall legibility, such as the large open area in mega block 30. If the large open space is fragmented into smaller parts, such as a small park within a large area, the wayfinding is better because the presence of small details and small paths contributes to legibility. Furthermore, in mega block 23, a cardinal path for a quick pass through the mega block, contributes to the less visibility, legibility and readability of a place. While walking through the mega block user does not know his or her position within the block, nor the position of the cardinal path, because of the enclosure of nearby open spaces. The position of new landmarks or semi-enclosed spaces can contribute to the better orientation.

Also, despite the big activity usage in mega block 23, there is a problem with the legibility of the space based on the position and enclosure of the small park areas. The legibility and readability are based on between marketing sign system and architecture of the mega block.

Furthermore, there is a psychological influence of colour, material, graffiti art, enclosure, and positions of communal open space on the user. There is a need for the user to examine a list of internal factors before the decision of route choice.

As for the methodology, we can conclude that the results have not been examined enough. It can be measured with more quantitative tools, such as space syntax in order more precisely define the intensity usage of space. Also, one of the disadvantages of the survey is that results represent the respondents' assessment as subjective results and it is based on a large number of respondents such as residents of the block who know that area and have a psychological background in that environment. There is a need to make a new kind of questionnaire for the new users who are not residents of the mega block. However, some types of psychological methods with tracking devices will help aim to examine the internal strategies of making decisions and the cognitive skills of the user.

Conclusions

Although we have parts of mega blocks with a good signage system,

the pedestrian activity is modest. It can be concluded that good readability/legibility and signs don't contribute to the activity, but to the orientation, navigation, and wayfinding in space which is very important in post-modern and post-socialist neighbourhoods. However, the constitutive buildings of the blocks have many similar elements based on modular repetition, concrete and brick which do not contribute to distinctions and orientation in space.

There is a need for universal signage that is not part of commercial usage, but for functional usage and better orientation in the mega block, connection with surroundings and above all, better wayfinding.

The guideline elements of transformation mega blocks' pedestrian networks should be focused on:

- place of the new semi-public or communal open spaces (such as parks or shared activity spaces) that should be concentrated around intersections rather than widely distributed along the route
- making routes with smaller turns or just making one cardinal route through the mega block which can contribute to pedestrian connection with a wider network of New Belgrade
 - different types of enclosure of communal open spaces.

These findings indicate that the process and method of this research can be used as a model for future studies in walkability literature, pedestrian, and transport planning within different sizes of cities and different types of environments. It can help in defining the transformation of different types of pedestrian networks and recognising/studying its important elements of activity.

Acknowledgement

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Beirut ARTitecture: Tactically reanimating urban public spaces for a sustainable and just future using Art and Technology – Part 1

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Abstract

On August 4th 2020, a major blast occurred in the Port of Beirut. This event added a lethal component to a city already struggling due to the 2019 economic crisis and the COVID19 pandemic; it left the city bleeding, fragile, empty, and on the edge of death. Based on Strategy&'s 'Beirut Explosion impact assessment' report1, heavy economical, infrastructural and physical losses were quantified. All this impacted not only livelihoods, shelter, safety, jobs, economies, education and basic needs; they also generated potentially lifelong trauma, psychosocial distress, anxiety disorder and mental ill-health. Almost 24 months since the blast, not all Beirut's residents have returned to the nearby areas, and gentrification that would further demolish heritage buildings and tear the fabric of social coexistence looms in the air. Although devastated, Beirut is continuously seeking change, light and positive transformation; the on-going crisis and the blast entail a rare opportunity to rebuild, both socially and physically. In light of these circumstances, the proposed tool - entitled ARTitecture - aims to 'recycle' Beirut's contested public spaces by using art-therapeutic drawing, body-based performance practice, digital transformation and urban acupuncture. The project tests a holistic, interdisciplinary approach to generating sustainable transformation in public space, directly informed by the lived experience of inhabitants.

Keywords

Bottom-up urban transition, art, movement, digitalisation, urban acupuncture

"Each age demands its own form," the Bauhaus architect Hannes Meyer wrote in his 1926 essay, 'The New World.' Today, we live in the epoch of a damaged planet, marked by the 'Age of Man', the anthropocene. Rapid worldwide development is behind social injustices, geopolitical wars, economic crises, CO2 emissions, pollutions and food insecurity. This form of development creates unsustainable and unjust urban growth - rural to urban migration is accelerating; cities are to host, by 2050, 68% of the worldwide population¹ - , and contributes intensively to climate change - Estimates suggest that cities are responsible for 75 % of global CO2 emissions² -. As a result, in 2020, a new headline swept the planet adding a new layer of degradation and fear; the COVID19 global pandemic. Observing the pandemic's impacts on the planet implies that the world is, more than ever, divided, closed and unjust³. This era of fear generated in us physical and mental illness, especially in cities. This context gives rise to the following questions, which we intend to answer:

- How to treat the settled trauma in urban spaces amidst the legacy of wars, pandemic, environmental and economic crisis impacts?
- How can innovative and inclusive animations of public spaces in form of urban acupunctures – treats the collective trauma and contributes to sustainable transformation?
- How to use the arts and technology to design and implement urban acupunctures, in public spaces, directly informed by the lived experience of cities inhabitants?

ARTitecture addresses these questions in Beirut – an archetypal city of trauma – while providing a platform for community participation and empowering them in the decision making process. Using art and digital tools, the research focuses on creating bridges between cities' public spaces and their inhabitants (Fig.01). It generates, in a new form of practice–research, blended dialogues that address the collective trauma, environmental challenges, the unjust urban development, and contribute to a bottom–up sustainable urban transition.

One would argue that despite profound damage and trauma, cities and communities are continuously rebounding after crisis.⁴ But is it the case of Beirut? Based on Aldrich findings⁵, five core areas contribute to a city bounce and to its resilience; organisational restoration, economic



Fig.1 Abstract visual representation of 'ARTitecture' concept - Source: Co-Labs 2022

productivity, citizen psychological well-being, infrastructure integrity and operational regularity. While looking today at the city of Beirut, aside some physical restoration, we fail to see concrete achievements in any of the above mentioned areas. So far the Lebanese government and Beirut municipality failed to repair juridical, physical, economical or mental damages. On another hand, during the first two weeks after the blast, grassroot response of citizens produced dynamic temporary urbanism and a cohesive communal ecosystem that filled the void generated by the municipality's absence. They joined forces in (i) cleaning the streets and homes from rubbles, (ii) assessing the buildings conditions, as well as (iii) mapping and installing pedestrian security pathways.6 But the lifecycle of this Ecosystem was short. Some of the motivated citizens organised themselves and created Non-Governmental Organisations, however the movement lost momentum and was quickly replaced by social private entities and multinational agencies' interventions. Among the lead initiatives, UNESCO 'Li Beirut';7 aimed to raise funds and muster technical support to rebuild schools, historical buildings, museums, galleries and creative industries, all of which suffered damages from the explosion. Another initiative is 'Baytna Baytak'; a grassroot born movement, which actively addressed housing restoration and rehabilitation; however a major fraud put it out of credibility. Such initiatives, although essential in reconstructing the physical damages, remains uncoordinated, leaving behind them major other gaps un-tackled most importantly mental health and psychological well-being of the citizens.

According to Kubler-Ross work on stages of grief, ⁸ Beirut post explosion has remained in its early stage of grief; the denial. When in other contexts, its bubbly civic society was able to progress further throughout these stages. A clear example to support this was the anger stage reached by the Lebanese civil society during the revolution in 2019 which was translated on the ground by the public spaces heterotopia. Other example of successful post traumatic responses of societies is Christchurch post-earthquake response in 2010 and 2011; it was driven by a strong sense of civic movement that insured a balanced recovery of services, city built form and communities.⁹

In order to progress throughout the stages of grief, and with the absence of political leadership and coordination, we suggest a bottom-up urban transformation strategy that will be a milestone in reviving Beirut streets, notably addressing the mental health needs and hence qualitatively addressing the collective trauma. In fact, such strategy is not new. In the 20th century, it was embraced by the mentor of 'project for public spaces', William Whyte¹o who outlined key elements for creating vibrant social life in public spaces. Based on his work, design should start with a thorough understanding of the way people use spaces, and the way they would like to use spaces. Nowadays, It has been manifested throughout different processes and concepts namely, "tactical urbanism"¹¹¹, and placemaking.¹² The latter were and still are actively used in urban farming¹³, restorative cities¹⁴, the smart, Data oriented, digitally manufactured version 3.0 "Citizen Co-creation¹⁵", and the ten design principles; Livability, Equity, Ecology, Nutrition, Access, Waste, Water, Resiliency, Energy and Heritage, all of which were tested in the context of Los Angeles.¹6

ARTitecture is inspired by the above mentioned strategies with a strong emphasis on citizen psychological well-being in the neighbourhood. Its initial step focuses on the understanding of the way Beirut inhabitant's use and would like to use streets while going through the grief process. The holistic process blends together; (i) proactive and healing art, (ii) movement and performance, (iii) digital interpretation and creation, (iv) tactical animation of public spaces, and (v) the community's continuous participation.

The research objectives are orchestrated through the concept of 'recycling' as a tenet of sustainable development. However, recycling is reimagined as an interdisciplinary artistic process that transforms art-therapeutic drawing into body-based performance, and performance into urban acupuncture, via a digitalized medium, to tactically reanimate cities public spaces. If successful, the research is to emphasize the central role of art in post-traumatic shock healing and contributing to a community-based sustainable urban transition

Proposed methodology

To better accompany the community in their post-traumatic shock healing within their city streets, a cross cutting collaboration process of five stages is tailored and aligned with the five grief process stages. Reconnecting the citizen to their well-being and their neighbourhood



Fig.2 Outcome of the 1 to 1 art-therapeutic drawings exchange in 4 public spaces in Beirut. from left to right; REF.Y1, M2, C1 and M1 – source: ARTitecture 2022

is key to create a sustainable bottom up urban transformation. As imagined and partially tested, the practice based community co-creation process is to be further investigated and elaborated based on the below structure;

Initial stage; a thorough contextualized urban understanding of the city with a focus on a neighbourhood. Following the investigation, the community will be invited to a 1 to 1 art-therapeutic drawing exchange community expressing and communicating by co-drawing (fig.02) – to take place in locations (streets and Public spaces) chosen by the participants. During this stage, our goal is to address the first stage of the grief process; the denial – This can't be happening

Stage two; Use the initial stage findings as basis to create choreographies driven by body movements. The creation process, articulation, sequence, and intensity are to be influenced by different parameters (Fig.03), namely; drawing details, colour interpretation and composition, physical location, interview, drawing digitalization, number of movers, etc. Our target is to address with the participants stage 2 of the grief process; Anger – why this have to happen. Stage three; Digitalisation and urban acupuncture design will go as follow

- Develop and code an Arduino Microchip¹⁸ connected to sensors.
 These sensors are to be placed on the performing body (ies) in public spaces to digitally translate¹⁹ stage two choreographies into data.
- Identify and extrapolate, through urban post traumatic theories, the parameters which influence the contested landscapes with particular emphasis on physical settings, marginalized communities, and environmental and spatial justice.
- Proposition of the urban acupuncture design for each initial stage locations will be done by; i) the injection of the collected data collected per drawing and per location into the digitally reproduced public space done grasshopper tool. ii) the collected data and urban parameters will be incubated into the tool's specific plugins.
- Stage four; revisiting the community; exchange and bargaining
- Injection of interactive (digitally and in person) events with the local public and private institutions. This will initiate a commu-





- Location; Brient
 Public Spaces in the
 Blast touched Zone
- · Recorded interview
- Hacorded interview
 Therapentic Silent communication using. Pastel, felt pen or Chancol

Stage two Movement translation Defining Association



stematy, speed, termina, sequence, emotion, rounds, body parts, scale, etc.

Means; bodyjer) (sole and or group), potential artifacts and or natallations.

Parameters that informs movements creation

- Composed music per drawing by Tobea Evali (Musician in Berlin);
- molody, choice of instruments, beuts, etc.
- · Choose Locations:
- materials, stories, bldg typologies, sounds, proportions, etc.
- colors, shapes, mood, the drawing session structure, drawing digitalization

+ The showings must

- · The interview.
- stories, translated emotions, keywords,

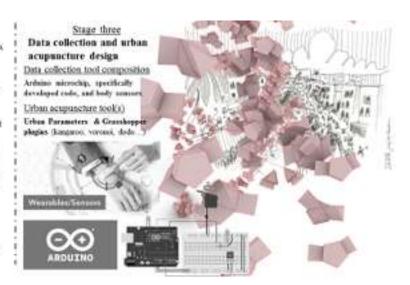


Fig.3 – Stages 1, 2 and 3 process parameters – source: ARTitecture 2022

nity-based experimental exchange to address the future of the place in question. During these events, the digital urban acupuncture is to continuously evolve by the community contribution and the data generated by their interactions. This co-creation experience is to tackle the grief process stage 3, bargaining and stage 4, Depression

Stage five; in each public space to be recycled, execute and animate the physical structure of the urban acupunctures with the community. Reclaiming the sense of ownership of the streets by fulfilling this stage is a sign of the grief process stage 5; Acceptance

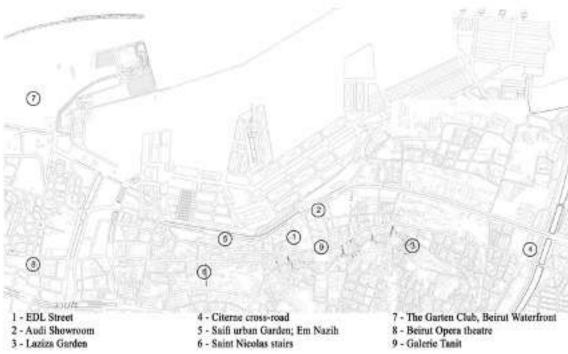
ARTitecture in Beirut; the tested phases

Initial stage

Beirut in totality is a potential lab for ARTitecture process experiments. Being demarked by invisible borders – where each neighbourhood host different form of challenges due to its social, economic, religious, and cultural diversities–, implies that we should focus on one small part of the city as a testing ground ahead of scaling up the intervention. The blast represents a rare opportunity to reanimate the touched area's public spaces; Therefore, Beirut chosen ground zero is the city directly touched areas by the explosion; Mar Michael, Gemmayzeh, Karantina, and Geitaoui areas.

After defining the area of intervention in Beirut, the main focus shifts towards the 1 to 1 art-therapeutic drawing exchange. It is to take place in locations (Public spaces and streets in the selected zone) chosen by the participants (Fig. 04). Each session is composed of;

- 5 to 10 minutes recorded only if accepted interview asking
 the participants to share the blast and the pandemic impact on
 their lives and to explain the reason behind their choice of location in the city. These questions help the participants to momentary reflect on these challenges impacts on them and their surroundings, reconnect to themselves and prompt the hidden
 emotions and trauma embodied in their subconscious
- 1 to 2 hours of silently expressing and communicating by co-drawing. This art-therapeutic exercise allows participants to freely express themselves and engage their emotions without



- 3 Laziza Garden

Fig.4 Locations of the fulfilled 1 to 1 art-therapeutic sessions – source: AR-Titecture 2022

being judged or having the feeling of being judged; it is a healing by drawing process that could achieve its goals upon repetition. On the inside of a reused corn flakes cardboard package — collected and consumed during the pandemic —, each participant co–draw with the artist (Eliesh) using one of the three proposed drawing tools; (i) charcoal, (ii) brush pens, and (iii) pastels. Each of the proposed tools helps transmitting unique moods, textures, emotions, details, intensity and layering.

Following an open call on social media, twenty persons shared their interest in the process. So far, nine people have participated in the art-therapeutic drawing exchanges in Beirut. Figure 05 shows the co-drawing session's details and the locations chosen by the participants that related to the Beirut Port explosion. It highlights the gender balance (5 female and 4 male participants), the focus on the young generation, the drawing tools choices (6 out of 9 chose pastels) and the participant's grief stage

Stage two

This stage focuses on the translation of the 1 to 1 art-therapeutic co-drawing session experience, ideas and context into an expressive sequence of movements. One would argue our choice of gambling on a less investigated medium - body movement- while knowing that text can be sampled and synthetized in natural language processing, and image in image processing to ultimately generate new architectural designs²⁰. Choosing the body as tool to generate urban acupuncture is not an act of a coincidence, rather a choice informed by our daily life. Movement and sounds have been considered a common language among disparate cultures, ethnicities, religions and backgrounds. When we are born, we move and cry; when we hear music, our body vibrates; when listening to prayers, we flow and transcend; when exploring a city, we walk in it and inject 'murmuration'; when getting married, we sing & dance; when dead our souls fly, and families become a grieving chorus. Moving bodies are a source of an accurate and transparent language. Each movement within a city or a space is accompanied by a sound of breath, an idea of a mind, a target, an emotional state and a signal of information. The body will be the instrument used to translate the inhabitants' trauma, needs and happiness. It will bring

Participant Ref.	Location	Age & gender	Drawing tools	Recorded interview	co-drawing recording	Grief stage
1. REF.Y1	EDL street	18-25 / F	Pastels	Yes	Yes	Anger
2. REF.J1	Audi showroom	41-60 / M	Brush pens	No	Yes	Denial
3. REF.F1	Laziza Garden	18-25 / M	Brush pens	Yes	Yes	Denial
4. REF.C1	'Citerne' cross-roads	26-40 / F	Pastels	Yes	Yes	Anger
5. REF.M1	Em Nazih	26-40 / F	Charcoal	Yes	Yes	Denial
6. REF.P1	Saint Nicolas Stairs	26 – 40/ F	Pastels	Yes	Yes	Denial
7. REF.M2	The Garten, Solidere	18-25/ M	Pastels	Yes	Yes	Denial
8. REF.B1	Opera Theatre	26-40/ F	Pastels	Yes	Yes	Denial
9. REF.R1	Galerie Tanit	26-40/ M	Pastels	Yes	Yes	Denial

Fig.5 1 to 1 art therapeutic drawing sessions details - Source: ARTitecture 2022

an authentic, accurate and straightforward message and contribute to achieving a bottom-up sustainable transformation. These developed movement sequences will be used to;

- Extrapolate the digital data that will be sampled and synthetized for generating the urban acupuncture designs
- Further engage the participants in the process and bring on board additional segment of the community; the movers
- Develop a generative matrix learning for the movement's transposition
- Showcase the central role of Art in designing, animating the chosen public spaces via artistic performances and NFTs creation (a potential source of decentralised funding for the bottom-up strategy)

In regards to the transposition design process, each of the movement sequences (Fig.06) is driven, in space and time, by articulation, intensity, steps, body parts, movement scales, speed, solo or numerous bodies and artefacts. It is directly and indirectly informed by a compilation of some of the below parameters (Fig.03):

- The drawing; its composition, choice of colours, integrated shapes, mood, and its digital transformation with the usage of image processors
- The act of drawing sequences and evolution (clearly visible in the 1 to 1 art-therapeutic session documentation). In some cases, these recordings shed the light on the act of drawing by erasing or a mood shifting (from warm to cold colours or opposite)
- The interview content and its flow. It helps extrapolating flagship stories, Keywords and the emotion state of the participant
- The chosen locations; its materiality, collective memory, landscape morphologies, building typologies, proportions and soundscape
- Composed music per drawing by the Berlin based Cellist Tabea Krah; melody, choice of instruments, beats, and so on.

A residency took place at Co-Labs - "A Project co-produced by Maqamat Beit El Raqs in collaboration with Amalgam Studio with the support of AFAC & Al-Mawred"-, Beirut (1-19 February, 2022). During the 19 days of the residency, various forms of processes were tested and



Fig.6 Body movement's creation during the Co-Labs residency— source: Co-Labs 2022

layers were integrated to develop body-based performance choreographies. Moreover, potential parameters of the 'recycling' process different stages were identified (Fig 03). In total, 7 drawings were transposed into movement sequences and / or installations. Participants were present to observe, comment and confirm or not the translation of the co-drawing session results. They were asked, if willing, to take part of the performance – in the way and with the tools they see it best- adding a new layer of their participation to the process thus an extra source of data and an in-depth work on their grief process.

To showcase the transposition process outcome through words or a paragraph seems experimental but inaccurate. The built movement sequences are a flow of frames in space driven by a narrative, and emboldened with energy. It could be shared via live performance or throughout a video but not in a text format. Figure 7 shows a summary of five of the tested movement sequences design processes

Stage three: Digitalisation and urban acupuncture design

This stage – still a work in progress – concentrates on the data collection scheme – using a coded Arduino¹ Microchip and motion sensors – from the previously constructed movement sequences and its integration in grasshopper to design a primary urban acupuncture in each of the chosen public spaces.

During the Co-Labs residency, we concentrated our effort on transforming drawings into movements (outcome shared above) and exploring some of grasshopper potential plugins. The reason behind leaving the Arduino coding for later stages (June 2022) is due to the necessity of identifying the digital data reading formats needed to achieve our final products on Grasshopper. To do so many plugins are to be tested and combined.

So far, two main grasshopper strategies were experimented. The first strategy focused on injecting the generated small spheres (nodes)

[&]quot;Arduino is an open source physical computing platform based on a simple microcontroller board, and a development environment for writing software for the board. It can be used to develop interactive objects, taking inputs from a variety of switchers or sensors [...], and other physical outputs. The boards can be assembled by hand or preassembled". source Payne, 2020

Participant Ref.	Used parameters to generate the	Sequence outcome	
	movement sequence		
1. REF.Y1	Drawing figures and colours	One mover performance + partic-	
	The co-drawing exchange dynamics	ipant contribution (painting	
	The chosen location representation in	splash dialogue) + Artefacts	
	the eyes of the community	(chair, hair sound instruments)	
2. REF. M2	Drawing composition, choice of col-	Multiple movers + participant	
	ours, integrated shapes and mood	contribution (as a DJ) + Artefacts	
	the chosen location; main building	(instrumental cladding)	
	typology and its function		
3. REF.M1	The participants interview	One mover performance + partic-	
	communication	ipant participation (sculptural	
	The Drawing fluidity	position)	
4. REF.C1	Tabea music composition	One mover + participant contri-	
	Stories and Keywords from the	bution (singing with a percus-	
	interview	sionist) + Artefacts (water)	
	Drawing mood		
5. REF.F1	Location; the garden	Interactive VR Digital installation	
	The playful kids during the co draw-	for Kids	
	ing session		
	The childlike drawing		
	Drawing digitalisation (Fig.08)		

Fig.7 Five drawings transposition into movement sequences summary—source: Co-Labs 2022

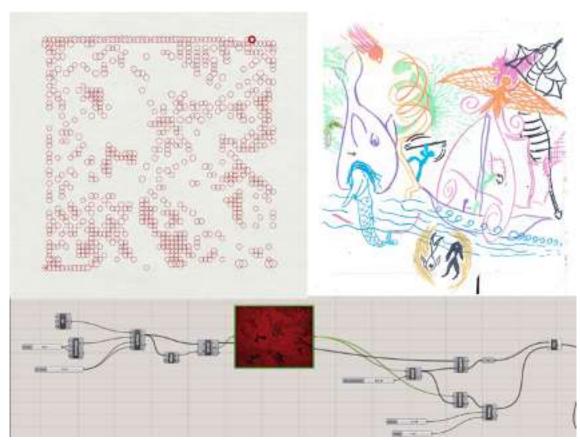


Fig.8 REF.F1 original drawing and its digital processing result based on the red color – ARTitecture 2022

(example Fig. 08) from the image sampler processor of each drawing in its 3D virtually reproduced location. The collected data from stage two outcomes will make the spheres move and rebound thus redistribute its location in space. Some of the spheres will be eliminated based on their positions (per example in the middle of a road) while others will be kept and used as a first step to design the urban acupuncture shell. The second strategy is to 'aggregate' (a grasshopper process) (Fig.09) the public spaces with the stage two data. The aggregation transforms the surfaces of surrounding buildings into shapes and geometries while using directional curves (in our context the body movement will be the source of these curves).

Both strategies outcomes are still primitive, inconclusive and do not elevate to a scientific level yet. However, the testing results highlighted a profound concern that needs to be properly dealt with. It showed alienated parametric outcomes completely disconnected from the context and the two previous stages. Could such translation be what the community is asking for? If not, how could we optimise the parametric and digital process to generate sustainable urban transformation via a well-integrated urban acupuncture in the city context and its urban fabric?

The above questions are a trigger to stay on track, notably, to ensure the preservation of the authenticity of the collected information while maintaining, the balance in between the different phases of the process. In this way, we could reach a qualitative, contextualised and sustainable urban transformation.

Conclusion

In this paper, we shared the structure of the practice-based design process – entitled ARTitecture – that tests a holistic, interdisciplinary approach to tactically reanimate urban public spaces for a sustainable future using Art and Technology. The process blends together; (i) proactive and healing art, (ii) movement and performance, (iii) digital interpretation and creation, (iv) sustainable animation of public spaces, and (v) the community's continuous participation. The success of this research is to emphasize the central role of art and technology in contributing to a community-based sustainable urban transition. Moreo-

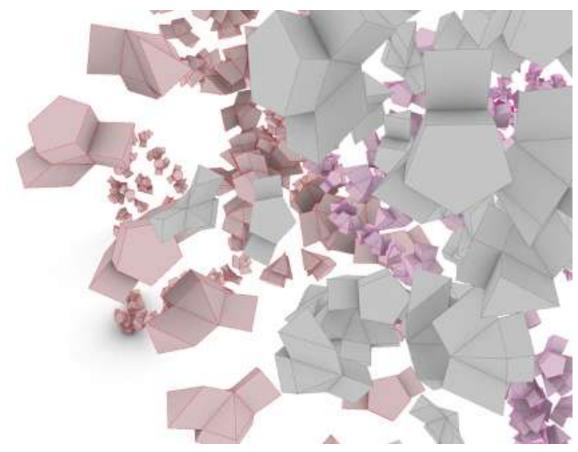


Fig.9 Grasshopper testing building envelopes aggregation – ARTitecture, 2022

ver, this project engages with the community and embarks it on the mental and psychological healing process. Throughout its structure, it actively takes the community through the several stages of grief within the city public spaces, a transformational approach: from denial to acceptance

While focusing on Beirut context, and after analysing its response to the blast based on Aldrich findings and its positioning in the grief process, major stages of the on-going method were tested. Up till today nine 1 to 1 art-therapeutic co-drawing sessions took place in public spaces creating an informative base and defining locations to be recycled. Moreover, seven of the initial stage drawings were transposed into movement sequences, ready to act as a digital data informant. As part of the third stage, the Arduino microcontroller board assembly and the motion sensors were put on hold, leaving space to grasshopper experimentation. Two Grasshopper strategies were tested without reaching so far a concluding outcome. These accomplishments are yet to be complemented with additional testing's in order to fulfil the process comprehensive cycle. However, up till today, the work raised multiple questions to be further investigated and tested especially when it comes to scaling up the work as well as to finding the balance in between the different engaged components (art and movement, digitalisation, sustainable urban acupuncture, and the community) in order to fulfil the goals of the bottom-up approach.

Although ARTitecture focuses in this paper on Beirut, the aim is to make the process transportable to other cities; by changing urban parameters, community responses and scenarios, this work is to be tested and implemented on later stages in another an archetypal city of collective trauma; Berlin.

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Appropriation and perception as demand indicators in places of great social interaction

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Abstract

Starting from the notion of "pracialidade" elaborated by Eugenio Queiroga (2001), this presentation intends to explore the appropriation by citizens in public places of great social interaction. To this end, we bring the approaches studied by historian Sandra Pesavento (2007) to urban spaces regarding their materiality, sociability and sensibility, in order to extract material for a "translation" of desires and "register of looks" of the population in these situation.

We immersed ourselves in fieldwork that allowed for readings derived from our own perception of place, which were confronted with theoretical foundations from different fields of study. We used images captured during fieldwork, emphasizing the use of the street and searching for the narratives constructed in the dissociation between denomination, proposed use, materiality and effective appropriation. We seek a critique between the role of the urban design professional, the built space and the desires for use and appropriation by the local user population, based on the assumption of the new urban planning paradigm proposed in the "New Urban Agenda" elaborated by UN-Habitat in 2016.

The practice of a critical architecture demands the apprehension of places, and a constructive interaction about these apprehensions, in the sense of generating critical reflections that enrich the discussion, and reinforce the sense of citizenship and governance, for the strengthening of the political and geoethical dimension.

Keywords

public spaces, appropriation, "pracialidade", geoethics, spatial justice

Conceptual Bases, Objectives and Methodology

The notion of "pracialidade", by Queiroga (2001), which rescues aspects of human geography in places of public use, is a fertile and indispensable field for the discussion proposed here. It rescues the difference between space and place, and focuses on the relationships that take place in these spaces, from the construction or alteration of their materiality, to the possibilities of social interaction and perception of ambience (sensitive reaction) by the actors involved, as formulated by Sandra Pesavento (2007).

Eugenio Queiroga (2001) qualifies the square based on the nature of the events that occur in it, not on the system of objects:

"What defines the square is what occurs in it, so a system of actions that has a strong public connotation, of free access, aiming at encounter, is what will characterize a subspace as a square." In this sense, situations of "pracialidade" may possibly occur in streets, avenues, open spaces, and even in buildings [...]" (QUEIROGA, 2001)

Sandra Pesavento brings the sensitivity and the "perception of the emotions and feelings of urban life," the creation of Ethos:

"It is through this mental process of approach that space becomes a place, that is, a carrier of meaning and memory; that we come to see a city as a metropolis, an urban reality that, since its emergence, has caused a revolution in life, time and space; that we create the categories of citizens and excluded to express the visible and perceptible differences in the urban context, provoking the creation of new identities from the gesture, the look and the word that qualifies" (PESAVENTO, 2007).

Another relevant formulation for this discussion is that of spatial justice, which according to Bernard Bret (2016) and Jacques Lévy (2021), brings the issue of spatialization of public investments and political ethics to the field of urban planning decisions, as key elements of the logic of social inequality. We will see how places of high intensity of social relations in different cultural, economic and social contexts present different degrees of urbanity, regardless of the quality of technical elaboration of materialities or the construction of bonds through the actions of community agents. They present geoethics, which, based

on John Rawls' moral philosophy, highlights the center-periphery issue and the "principle of repair", evolving into the logic of equity and spatial justice.

This idea puts into question the professional performance in the field of urbanism, whether in the capture of desires, in the dialogue of building a collective imaginary, or even in the flexible and adjustable organization of responses and results. The porous city of Richard Sennet (2014) or of Bernardo Secchi and Paola Viganò (2011) point us to an urban dynamic that remakes itself all the time, and to a constant incremental relationship with its citizens.

From the understanding of the method as a research procedure, we propose to interpret the space and phenomena based on hybrid principles of analysis that are able to face the complexity² of the nature of the work. On one hand, the conceptual bases presented above supported us in the reading of public appropriations during the fieldwork. On the other hand, the immersion in the territories allowed for readings derived from the knowledge of the place itself. The perceptions, sensations, and affections experienced in the encounter with the territory were confronted with theoretical foundations that come from distinct fields of study and resulted in critical processes and the production of collaborative and more open knowledge.

Besides the tension between the experiences in the territories with the theories studied that allowed us to interpret the results of the reading made of the field, there are other broad methodological principles that guide and permeate all the work: inter-scalar reading because the territory is multiscalar³. The scalar interrelations are the recognition of

¹ North American philosopher who elaborated theory on the principles of justice, inequality, and social repair. "A Theory of Justice," 1971, USA.

In this paper, we adopt the concept of complexity by the philosopher Edgar Morin (2005): "Complexity arises there where simplifying thinking fails, but it integrates within itself everything that puts order, clarity, distinction, precision into knowledge. While simplifying thinking disintegrates the complexity of reality, complex thinking integrates the simplifying ways of thinking as much as possible, but refuses the mutilating, reducing, one-dimensional, and ultimately obfuscating consequences of a simplification that considers itself a reflection of what is real in reality." (MORIN, 2005).

³ Milton Santos emphasizes that the place must be understood considering the totality of the process, and the global reality must also be understood through regional differences (SANTOS, 1978).

the realities of place. Thus, in the light of the principle of multiscalarity, we propose deepening, approximations, and also, dialectically, the opposite exercise, which is the distancing, the reading of the context. It is understood that even ordinary everyday actions take place within a multiscalar context; places as subjects, and not as objects of study; The recognition of the place, not as an object of study, but as a place of enunciation, sensitizes and transforms previous concepts, and allows a closer reading of reality; Immersion in the field.

Public appropriations challenge us to seek deeper and more dynamic interpretations, because in open public spaces, habits, negotiations, disputes, and conflicts change rapidly. Often the physical structures of spaces may show similar realities from one place to another, but through the prism of public appropriation, the elements and phenomena are differentiated.

The study of human behavior and the construction of the bond of community and identity with its surroundings provides new forms of analysis, evaluation, and design interventions. Civil empowerment is redesigning urban and territorial policies and its incorporation in the New Urban Agenda reflects the rise of democratic culture, built on the organizational capacity of communities (CERVERA-ALONSO DE MEDINA ET AL, 2022). In this sense, recognizing the singularities of place expressed largely in public appropriations, as opposed to the homogenization of unifying standards, is part of the global commitments of the 2030 Agenda (United Nations, 2015).

It is about seeking more depth and empathy in the way of looking, perceiving, understanding, communicating: giving voice to the territories, to the way they are, the way they are said, the way they are reported. The exercise of increasing the capacity to understand and explain how each territory "speaks", through its senses and voices, makes us affirm the practice of the specialist, in this case the architect, as a translator of desires.

We use images captured during fieldwork, in particular in Mexico City, São Paulo and Lyon, focusing on street use and seeking narratives constructed in the dissociation between naming, proposed use, materiality and actual appropriation. Starting from the understanding that when it comes to the human scale, the methodologies of perception and

apprehension of appropriations become quite universal. Considering that the scale of reference is very close in different cultures, contexts and ethnicities, we seek to build a critique between the role of the urban planning professional, the built space and the desires of use and appropriation by users.

At the core of this questioning is the concern to create new visions, new "translations" and an intense and diverse dialogue between urban planner and citizen in order to legitimize the processes of participation and governance. The awareness of the co-responsibility of citizens with their environment has irreversibly changed our professional practices and a greater integration of existing participation devices, methodologies and instruments in the creative process of professional practices that intervene in the territory is still pending (CERVERA-ALONSO DE MEDINA ET AL, 2022).

The practice of critical architecture requires the apprehension of places, and a constructive interaction about those apprehensions. It is important that interpretation – and with it the ability to listen, to put oneself in the other's place, and to understand what each situation raises – acquire a "greater weight" to generate critical reflections that enrich the discussion and develop more in the field of ideas and actions than in that of individual legacies.

Vania Bartalini (2017) contributes to this discussion with qualitative analysis associated with phenomenology as a complementary means to quantitative analysis, where the focus is on the researched and their relationship to the world in a personal, social, and historical context⁴. By historical context the psychologist refers to the "demands of the world" to the researched at the time of the research. And the phenomenon is directly linked to this context. She also states that the qualitative research associated with phenomenology arises as a counterpoint to a positivist thought, where facts are measured by the incidence and constancy of events recorded by quantitative research, which would be presented as scientific means, and therefore, truth.

Jean-Paul Thibaud talks about ambience starting from the assump-

Information provided by Vania Bartalini in a talk given on July 20, 2017 at Espaço Pitico, São Paulo.

tion of phenomenology and pragmatism that considers "the place of the body in our way of apprehending the world" (THIBAUD, 2002, p 186). From there he identifies four factors in the study of ambience: "the emphasis on the mobilizing power of place, the recognition of the articulating value of gesture, the revelation of what is implicit in everyday common practices, and the opening of perception to its affective dimension" (THIBAUD, 2002, p. 187). It therefore takes away the exclusive value of the physical elements of the place, gives light to the cultural factor of body practices in space, makes explicit the interpretive activity of the practice of coexistence and social interaction, and marks perception and cognition related to sensitivity. The notion of ambience, according to him, is situated at the intersection of three contemporary issues: quality of life of citizens through livability and hospitality5, socioeconomic strategies by urban marketing, and ecological or sustainability problems (THIBAUD in VAD, 2014 apud CHASLES, 2019, p.182)6.

Vania Bartalini (2017) states that, according to the phenomenological bases, in which the "landscape is understood as the fruit of the relationship Man/place/world, it seeks to approach the ideas of nature, space and landscape, from the perspective of what is conventionally called the *experiencer*" (BARTALINI, 2017, p. 43).

Field practices: inter-scalarity and diving into place

Researching urban realities from the perspective of public appropriations of open space systems is related to the exercise of research as transgression, tensing cultures, socioeconomic structures, historical forces and, above all, the transformation processes of spatial configurations. Such complexity demands the understanding of urban space from different scales of approach.

The interscalarity builds in certain phenomena a greater protagonism of one scale or another, but in the spatial totality, all scalar inter-

⁵ Habitat as a place of welcome, relating to hospitality; or even "organization of the living spaces of individuals and groups" (LUSSAULT, 2013, p 437).

⁶ VAD (2014) - Sustainable City and Planning, Urban Ambience and Sensory City, technical journey of June 19, 2014.



Fig.1 Santa Fe (México City): Multifunctionality and complexity in street uses. Source: Isabela Sollero Lemos, 2021



Fig.2 Jardim Ângela (São Paulo): "Pracialidade" - children playing in the opened space of the street . Source: Isabela Sollero Lemos, 2019

relations represent the recognition of the realities of place. Thus, the interest in the local scale, without losing sight of the multiscalarity, can contribute to the strengthening of local interests that are determinant for the qualification of territories, for the implementation of more integral and efficient solutions and, above all, for a future and fairer vision of the city. Spatial justice⁷ is precisely about believing in the power of space, in the power of the city as a shaper and transformer of societies, as a source of production of a new politics, of a new critical look at the world.

Accumulating experiences in the territory transforms the world view and complements the reading derived from one's own knowledge of the place. Moreover, it enables an opening for the discovery of other knowledge and other competencies that can be articulated, or even contrasted by opposition. Magnani (2022) states that

"The researcher not only grasps the meaning of the native's arrangement, but by perceiving this meaning and being able to describe it now in his (the analyst's) terms, he is able to attest to its logic and incorporate it according to the standards of his own intellectual apparatus and even his value system " (MAGNANI, 2002).

In this sense, it defends the horizontal insertion of the researcher in daily encounters, without predetermined hierarchies, since we are all part of everyday life, as one among many members of society, which seeks to act for improvements, as do many others. Such ordinary and trivial insertion, open to the possibilities of daily coexistence, is different from that of the specialist and impartial observer (SPINK, 2008). Still, being in the field is not necessarily a guarantee of success. Beyond being present, the ability to observe and listen is fundamental to develop and open new windows.

The importance of interpretation

The study of public appropriations challenges us to seek deeper and more dynamic interpretations, given that in public open spaces habits, negotiations, disputes, and conflicts change rapidly. Often the physical

⁷ On the concept of "spatial justice," see: LÉVY, J. Le Tournant Géographique: Penser l' espace pour lire le monde (The Geographical Turn: thinking space to read the world). Paris: Belin, 1999.

structures of spaces may show similar realities between one place and another, but through the lens of public appropriation the elements and phenomena are differentiated. Therefore, how to stimulate otherness to read and understand appropriations in different contexts of the city? How can we think and strengthen our capacity to interpret and act in the territories?

We can reflect on the stages that involve the study of public appropriations: (i) identification, (ii) interpretation, and (iii) representation. At first, appropriations are common, banal socio-spatial practices. All people are able to describe them, since they all perform these practices as part of their daily lives. However, because of its dynamism and its different temporalities, its representation is complex and, at the same time, fundamental as a tool and input for project propositions and public policies.

Even the "act of identification" is linked to personal perception. The elements that each person distinguishes in a given territory can be different, because of the different relationships built from one's own experiences. We recognize the world based on our references in life, and this makes us choose some themes or elements of that place and not choose others. And this choice carries a judgment that values certain aspects and others not – that is, even if not in a scientific way (in the narrowest sense of what is conceived as science), the identification occurs through the personal lens of each one, which will cast some issues with more force than others. Edgar Morin (2011) states that

"Cultural imprinting marks humans from birth, first with the stamp of family culture, that of the school next, then continues at university or in professional life. Thus, the sociological and cultural selection of ideas rarely obeys their truth; it can, on the contrary, be ruthless in the search for truth." (MORIN, 2011, p.27).

The sense of identification of territory presents the "preconceptions" that are carried here and there, but makes possible the creation of fields of constructive interaction: we perceive different things and share such differences horizontally for a closer understanding of reality if we are open to being surprised.

In the representation stage, despite the existence of interesting examples⁸, the methods of analysis, mapping, and graphic representa-

8 Some tools of experiential approach can contribute to the

tion of appropriation of public open spaces have been little explored, are still limited in scope, and are sometimes not very expressive, especially in the field of Architecture and Urbanism. It is believed that this happens, not because of lack of technical competence of professionals, but perhaps because a unique and "miraculous" method is sought to be replicated in any and all spaces. However, if public appropriation is unique to each place, each group of people, each culture, then how could a "model method" be pertinent in all territories?

It is precisely in this effort that the importance of interpretation lies: seeking alterity can be a path to thinking with the audacity to transit in other contexts. Understanding the territories requires efforts that go beyond the technical categories of quantitative or qualitative analysis. It is about seeking more depth and empathy on the way of looking, perceiving, understanding, communicating: giving voice to the territories, to how they are, how they are told, how they are reported. To think of this "middle way", which is interpretation, as the heart of the process. This exercise of enhancing the ability to understand and explain how each territory speaks, through its senses and its voices, makes us assert the architect's practice as a translator of desires.

Materiality, sociability and sensibility

From this, it is possible to discuss certain aspects inherent to the relationship between materiality, sociability and sensibility proposed by Sandra Pesavento. In the case of the Latin American peripheral territories studied, the lack of clear physical boundaries between the private and the public space of the street, and also the coexistence in dense urban fabrics promotes some relations that are intensified. The strong coexistence between residents generates conflicts, but also generates sociability and urban vitality. Social interactions, "neighborhood

meaning and understanding of place such as walkthrough, behavioral map, cognitive mapping, among others. Still, these are techniques that, when defined beforehand, can limit the perception of place and prevent the researcher from seeing elements and phenomena that go beyond that content.

⁹ The idea of the "technician as translator" was presented orally by Michel Lussault in a lecture during the "Chôros 36h" event, promoted by the Chôros research laboratory at the École Polytechnique Fédérale de Bruxelles in 2020.

dynamics", and cooperation develop, even if by necessity, and commonly reveal creative attitudes in everyday spatialities.

On the other hand, in the city of Lyon, although some of the squares studied present sophisticated designs with an aesthetic appeal, they do not elicit social interaction. There is no cultural activation and few permanent attractions. Other squares had their functions transformed and decharacterized over time and, consequently, there was an emptiness of "pracialidade". New axes of motorized mobility were prioritized and pedestrian crossings became risky, making them weak places from the point of view of social interaction.

Thus, despite material progress in terms of urbanization, there is still a lack of urbanity, understood as the spatial quality that derives from positive social relationships that promote encounters in common places and thus become central to the community, points of confluence, meaning and identity (PEREMIQUEL, 2020).

Therefore, restricting oneself only to materiality is not enough to interpret urban realities and understand the meanings that each place carries. If in fact it is of interest to understand such complexities, how to better interpret the different ways of life in the spaces?

A critical perspective on the role of the architect

Interpretation brings with it subjectivity because it is done by the individual or collective subject. This causes the same tool to build different results, depending on the subjects' interpreters. However, even this individual-subject is its individuality, and it is also its collectivity. Collective because culture exists, and it is responsible for the multiple roles of each individual subject. Individuality does not erase the fact that we are collective subjects – that we come from certain places, that we acquire certain knowledge, that we participate in certain social groups. When we are aware of our collectivity present in everyday reality, we put into practice social skills of communication, otherness, and humanity. Thus, subjectivity and empathy complement each other. If they are articulated and cultivated, own knowledge can be exchanged beyond cultural differences, in the search for building alternatives collectively. About the valorization of different knowledges, Boaventura de Sousa Santos (2009) states that



Fig.3 Jardim Ângela (São Paulo): Blurred boundaries between private space and the street – strong coexistence. Source: Isabela Sollero Lemos, 2019; Fig.4 Place Gabriel Péri (Lyon): A place of intense and diverse social interaction, with a building as a "visual barrier" of an immigrant neighborhood, in a place of historical reference. Source: Katia Canova, 2019



Fig.5 Jardim Ângela (São Paulo): The street and the sidewalk as spaces for coexistence and welcoming. Source: Isabela Sollero Lemos, 2020; Fig.6 Place des Cordeliers (Lyon): The street and the sidewalk as places of passage and urban services – access to the subway, taxi stand, way to the bridge. The square was mischaracterized. Source: Katia Canova, 2018



Fig.7 Santa Fe (México City): Extension of local commercial activities to the street creating places of interaction and sociability. Source: Isabela Sollero Lemos, 2021) Fig.8 Place des Jacobins (Lyon): A place of tourism and passage, which does not arouse social interaction and has no attraction for permanence. Source: Katia Canova, 2018

"Colonialism, in addition to all the dominations for which it is known, was also an epistemological domination, an extremely unequal relationship of knowledge-power that led to the suppression of many forms of knowledge proper to colonized peoples and/or nations. The epistemologies of the South are the epistemological interventions that denounce this suppression, value the knowledges that have successfully resisted it, and investigate the conditions of a horizontal dialogue between knowledges. We call this dialogue between knowledges, ecologies of knowledges" (SANTOS, 2009).

To be successful, the ecology of knowledges must be trans-scalable (SANTOS, 2009). And the preponderance of this relationship of knowledges depends precisely on the context, on the place, in light of the concrete results intended or achieved by the different forms of knowledge. That is, preference should be given to forms of knowledge that ensure the greatest participation of social groups involved in the design, implementation, control and enjoyment of the intervention (SANTOS, 2009), regardless of its nature.

In this case, architecture and urbanism as a formation can stimulate this architect subject (individual and collective), with all the subjectivity and empathy in his interpretations, to find new possibilities at every corner, to look at things and see the possibilities of that being different and imagine other ways of relating people and places. At the same time, the immersion in the territories, fundamental in studies of public appropriation, also points to a critical look at the architect's craft: the realization that, in general, the Architecture that is taught is very distant from the city that is practiced. To go from (i) identification to (iii) representation (or even proposition) reduces the complexity of urban analysis and, consequently, limits the possibilities of thinking about projects of territorial transformation and overcoming inequality. The practice of a critical architecture demands the apprehension of places, and a constructive interaction about these apprehensions. It is important that "middle way", which is (ii) interpretation - and, with it, the ability to listen, to put yourself in the other's place and understand what each situation raises - gains "greater weight" in order to generate critical reflections that enrich the discussion, and are developed more in the scope of ideas and actions than in the scope of individual legacies.

It is about thinking about what is "common," as what is shared collectively by several – and these "several" that make up the specific grouping can be multiform and enormously heterogeneous (GUTIÉR-REZ AGUILAR, 2017)¹⁰. Think of what is common as a collective action of production, appropriation, and reappropriation of what one has, and what is made; of what exists, and what is created.

This is not a questioning of the importance of the architect's role in shaping the city, but a belief in the ecology of knowledges as a way for the architect to contribute to popular architecture¹¹. It is about understanding the multiplicity of experiences that exist in our society, and supporting this diversity. Starting from the recognition and articulation among the different knowledges, it is about trying to read places better, and therefore, by interaction, to work better in places. Developing open knowledge that includes understanding the various *habitus*¹², advancing towards learning from the territories, and building together.

Conclusion

Measuring urban quality presupposes a complex discussion between variables of different natures. As architects, we are very familiar with obtaining and treating material data, but social and sensibility/perception data are great challenges to "look", "listen" and "translate" when there is a need to quantify and weigh situations for a comparative analysis or to support administrative decisions.

In the methodological approaches and exercises presented here it is clear that the scale of analysis enables different looks and approaches,

Our translation. Original in: GUTIÉRREZ AGUILAR, R., 2017, Horizontes comunitários populares. Producción de lo común más allá de las políticas estado-céntricas. Madrid: Traficantes de Sueños.

[&]quot;Popular" in the sense that it belongs to the people, of empowerment; which does not mean self-construction, although it can dialogue with it and learn from it as well.

Habitus is a concept defined by the French sociologist Pierre Bourdieu and refers to a system of embodied dispositions and tendencies that organize the ways in which individuals perceive the social world around them and react to it. Habitus is "a system of durable and transposable dispositions which, integrating all past experiences, functions at every moment as a matrix of perceptions, appreciations, and actions – and makes possible the accomplishment of infinitely differentiated tasks, thanks to analogical transfers of schemes" (BOURDIEU, 2003).

and that at the local scale there is a greater flexibility and creative potential of ways to approach and capture the desires and practices of sociability. We also observed that the practices of conviviality are key elements in the qualification of urban environments. With this we realize that it is not the more elaborate materialities or greater importance of financial investments that determine a more qualified urbanity.

In the discussion of social participation in the decision-making process on democratic urban planning it becomes increasingly urgent to study and propose new ways of bringing technicians and the population closer together, in addition to, and for, the qualification of governance. The inter-scalarity associated with interdisciplinarity affirms the need for strengthening processes. Moreover, the change in the paradigm of urban planning proposed in the 2016 UN-Habitat New Urban Agenda places the citizen at the center of discussions, as the main agent for defining demands, as the main scale of reference, and as the maximum beneficiary of actions.

In this logic, it is clear that the daily dynamics and the process of building affective sociability, belonging, and cultural appreciation are or should be the essential guidelines for technical work. The qualification and diversification of participatory processes is an urgent and central matter in contemporary urbanism.

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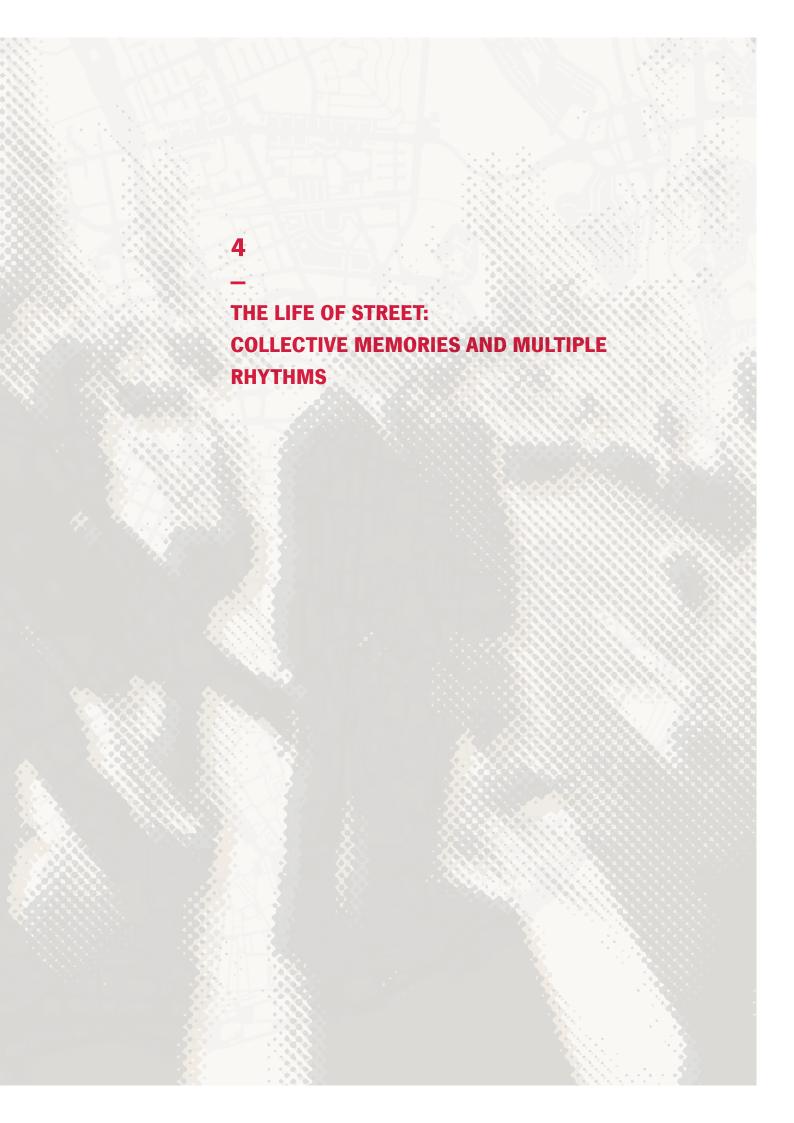
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Transport as a public space: criminalisation and daily experience of women in Mexico City and Beirut

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Abstract

The public-private dichotomy inherent to modernity has established forms, behaviours, and rules on how public spaces, particularly streets, are organised along with what is considered appropriate behaviour for women. Beyond their role infrastructural role of connecting city parts, and their morphological delimitations, streets represent conflicting daily practices of production and reproduction of life in which women are violated for various reasons and in different ways. Likewise, the street is interconnected to mobility and represents a continuity of public transport. In this sense, it is essential to highlight what the street represents as a public space and as a continuity of public transport, as experienced in the daily practice of women. Mexico City and Beirut are the contexts chosen for this research, nothing that both cities have a rich history of violence against women, especially while commuting with public transport and through public space. From women's experiences in the streets and public transport of both cities, this article aims to build an explanatory framework based on critical feminist theory and intersectionality, which allows relational spatial expressions of what represents both spatially and ideologically the street and public transport as public space in both cities. This framework would serve to identify the types of violence suffered by women in the public space, as well as the conditions they face in their daily commuting practices. The research provides a springboard to expand this study to other contexts.

Keywords

Beirut, criminalisation, gender, Mexico City, street

Introduction

This article focuses on addressing violence against women along streets and public transport in Mexico City and Beirut, from a gender perspective, which allows us to delve into the role of urban design and planning. Starting from a critical reflection on urban studies and feminist theory, the theoretical-methodological framework is based on the demystification between the construction of the binomial between the public and the private (Carole Pateman; Gerda Lerner; Raia Prokhovnik; Chiara Cerri, among others)¹ trying to reflect on the implications of this border, which has established practices and stereotypes of behaviour for women (John Archer and Sara Freedman), by not recognizing the connections that this represents at the level of mobility practices and transport infrastructure public (informal and formal) (Talja Blokland; Robin Law). We question the hegemonic conception of public space and the false conception of democracy (Elizabeth Grosz; Teresa Del Valle; Doreen Massey). We start from the problem of differential practices that women and men have in the use of the street and its extension to public transport, and how this perpetuates asymmetric relations and violence towards women, who organise their daily practice in a differential way, for the care of what it represents to walk in public. we conducted an online questionnaire survey to identify the specificities of practices and violence in the streets and public transport of the two cities. What does the street represent for the women of Mexico City and Beirut? How is the violence experienced by women, and re-signified in geographical contexts in which religion sets differential guidelines in gender roles?

Methodology

The theoretical-methodological foundations that allowed building the critical path that organises this work's objectives, are based on

Carole Pateman. *Críticas feministas a la dicotomía público/privado.*Barcelona: Paidós, 1996; Gerda Lerner. *La Creación del Patriarcado.*Barcelona: NOVAGRÀFIK, 1990; Carole Patemane. *Contrato Sexual.* São Paulo: Paz e Terra, 1993; Raia Prokhovnik. Public and Private Citizenship: From Gender Invisibility to Feminist Inclusiveness, 60 Feminist Rev. 84, 87, 1998; Chiara Cerri. *La Subjetividad de Género.* El sujeto sexuado entre individualidad y colectividad. Granada: Universidad de Granada, 2010.

feminist and critical urban theory approaches to the two cities analysed. At first, the two cities seem disparate, yet the comparison is established on a series of variables derive from the objective and theoretical review that supports the exploration on violence that women experience on the street and public transport and upon which they organise their practices in public space. The four dimensions of analysis include: the demystification of the public and the private and the role of women; the ideological conception of the construction of a democratic public space; the stereotypes that have been built around women and their presence in the public; and the experience and organisation of the daily life of women in the street in the face of violence and harassment. These dimensions were established to enable a comparison of similarities and divergences that organise the lives of women in relation to political-economic and especially religious aspects in both cities.

To understand the scope of the experience and perception of violence, and harassment in streets and public transport, an online questionnaire was conducted in March 2022. It was disseminated in English and Spanish using the researchers' social networks. The questionnaire aimed to collect data on the respondents' demographic profiles, the usual means of transport to their main daily activities (work, study, leisure, or care), distances and centres of activity, perceptions, behavioural patterns, and experiences in the use of public transport. The survey was conducted over six days, closing with a total of 45 responses for Mexico City and 37 for Beirut². The questionnaire allowed us to understand how users' daily lives were configured between streets and public transport, but also explore whether there is a specific typology of the street that conditions or favours its use while commuting. Also, it was important to understand how the use of the street as public space is related to the use of public transport, since in the proposal to remove

It is important to mention that this was an exploratory study, which is not representative of the total population, but it allowed us to have an approximation to the experiences that women have and the limitations in relation to men in the use of streets and public transportation. Also, respondents were given a cut-off date in relation to the article's submission and while considering that with online surveys, response rates decrease over time.

boundaries between the public and private, we start from the assumption that one cannot be thought of without the other.

Understanding Mexico City and Beirut

Considering the differentiated geographical contexts of Mexico City and Beirut, various elements seemed decisive to the analysis, which allowed us to understand how the scope of violence and harassment in the streets and public transport of both cities manifested, but also to deconstruct a geopolitical ideological framework that configures levels and structures of violence that are apparently built in a normalised manner. Based on a brief contextual analysis of both cities, the research includes a descriptive analysis and interpretative analysis on the following variables: perception and experience in the use of transport as a public space; proximity of home to work, study, leisure and their patterns of behaviour, perceptions, and considerations; regular means of transport to work, university, activities, and leisure; distances and work centres; ranking on the experience of public transport and streets.

Mexico City

Mexico City, Mexico's capital is the largest metropolitan area in the Western Hemisphere. According to the INEGI, in 2020 the population reached a total of 9,209,944 inhabitants, 4,404,927 Men and 4,805,017 Women. Mexico City concentrates the powers of the Union and is divided into 16 territorial demarcations, known as mayoralties. The city has a pre-Hispanic past, to which comes the Spanish conquest, the vice regal era, independence, and the political changes between the nine-teenth and twenty-first century, and more recently the political reform of the city.

Addressing the stereotyping of "public women"

At the country level, one of the main problems is gender-based violence GBV), sexual harassment, femicides and enforced disappearances. Although in some states the situation is graver than in others, the fact is that it is a transversal problem. For example, the registration of femicides in Mexico in 2018 according to INEGI is the highest that had been registered in the last 29 years (1990 to 2018), above those registered in 2009 (1,925), which represents the year in which the threshold of 1,623 registered in 1992 was broken, which was the highest of the

period from 1990 to 2008.3

The femicide rate in Mexico was 1.63 per 100,000 women during 2020, which represented an annual increase of 0.3 percent, according to data released by the National Executive Secretariat of Public Security (SESNSP). And only in the first two months of 2021, the rate was 5 femicides per 100 thousand women, an alarming figure compared to the previous year. It is important to note that, according to official data, from 2015 to November 2020 femicides and violent deaths of women have doubled.4 During the health emergency, violence persisted in Mexico; in six months (January-June) of 2020 alone, 1,844 homicides of women were registered. This situation confirms the data previously calculated by organisations and institutes: every day in the country 10 women are murdered. In 2021, the CDMX counted 66 femicides, and in March alone there were 14 victims, while the monthly average was four to five women killed. Sexual harassment in Mexico and in Mexico City is highly present, and this in turn is a very normalised aggression in Mexican society, in such a way that many believe that it does not really exist, which seems to be the case also in Beirut. In their daily lives on the streets and on public transport, women feel in constant danger from normalised violence. This type of aggression stems from the inequality of power that exists between the genders, and the fact that we live in a patriarchal country, in which women's rights are not recognised.5 For centuries, and like other contexts, Mexican culture has constructed male stereotypes that characterise men as household providers, heads of household, and, to some extent, decision-makers. In Mexico, the Movement for Gender Equality has managed to place the issue on the public policy agenda. Thus, the fundamental principle of equality between men and women was integrated in 1974, in article 4 of

³ https://laverdadnoticias.com/mexico/Casos-de-feminicidios-en-Mexico-en-2018-segun-Inegi-20210508-0051.html

⁴ https://www.elimparcial.com/mexico/CDMX-registra-seis-feminicidios-en-enero-de-2022-20220224-0023.html

Patriarchy is a historic creation crafted by men and women in a process that took nearly 2,500 years to complete. The first form of patriarchy appeared in the archaic state. The basic unit of his organisation was the patriarchal family, which constantly expressed and generated its norms and values. We have seen how profoundly definitions of gender influenced the formation of the state (Lerner, 1990:62).

the Political Constitution of Mexico, from there other laws continued to be implemented and institutions with a gender perspective were created, for example the reform to Article 4 of the Constitution, the Law of the National Institute of Women, the General Law of Violence. Since 2007, sexual harassment has been recognised as a legal offence thanks to the General Law on Women's Access to a Life Free of Violence (LGAM-VLV). Sexual harassment has been criminalised in the Federal Criminal Code since the beginning of 1991.6

Beirut

Beirut is the capital city of the republic of Lebanon, which was constituted in 1943, with a democratic, consociational government and free-market economy privileging private interest over the public good. Being a port city, and since the medieval period, Beirut was a mosaic of cultures crossing between the east and the west, resulting in diverse expectations for women's behaviour in public spaces. The Republic's decision to favour the construction of road networks facilitating vehicular mobility and trade meant that the integration of public transport in people's daily lives was not prioritised. During the civil war 1975-1989, the public domain in Beirut including transportation terminals, public transportation and public spaces were annihilated, and mobility was reduced within the territories of the fragmented communities residing within and around Beirut. Also, the differentiation of dress

⁶ https://www.milenio.com/estilo/ como-se-castigan-el-acoso-y-el-hostigamiento-sexual-en-mexico

⁷ Christine Mady & Angelique Chettiparamb. "Planning in the Face of 'Deep Divisions': A View from Beirut, Lebanon." *Planning Theory* 16, no. 3 (2016): 296-317.

⁸ Samir Khalaf. *Heart of Beirut: Reclaiming the Bourj.* London, Saqi Books, 2006.

⁹ Christine Mady. "Experiencing Mobility under Instability: A Perspective from Beirut's Informal Bus Riders." *Urbani Izziv*: Changing Streets in Changing Cities: Providing Streets for All? (Special Issue, 2021) 23–36. https://urbani-izziv.uirs.si/content_p?id=82&id_k=s%20%2032 (last accessed March, 3, 2022).

¹⁰ Christine Mady. "Experiencing Mobility under Instability: A Perspective from Beirut's Informal Bus Riders." *Urbani Izziv*: Changing Streets in Changing Cities: Providing Streets for All? (Special Issue, 2021) 23–36. https://urbani-izziv.uirs.si/content_p?id=82&id_k=s%20%2032 (last accessed March, 3, 2022).

code for females depending on their religious and sectarian affiliations marked visible differences for women outside the private domain. After the war and since 1990, despite efforts in 1996 to reinstate public transportation, the available shared transport system remains informal and stigmatised, let alone regarding the presence of female riders, and their stereotyping. The reality is an informal system that echoes the wartime divides, with some exceptions of connecting across communities. Also, the share of non-motorised mobility on the priority list meant that with the depletion of the public domain, walkability has decreased, and the common means of commuting is by car rather than on foot. Both walking and using the informal bus system in Beirut have been stigmatised, especially in the case of women, reflecting a dominant gender stereotype.

Addressing the stereotyping of "public women"

The origins of stereotypes for women in Lebanon are related to religious, social and cultural differences.¹¹ This has affected legislation in relation to gender. There are also laws in Lebanon discriminating against women starting with the constitution: "the Constitution does not explicitly ensure the right to equality between men and women and explicitly excludes female foreigners (such as migrants, refugees, and foreign workers) who are not citizens from constitutional protection against discrimination."¹² Also, personal status is governed by religious authorities' laws and not a civic law. Moreover, even if laws to secure women's justice existed, several obstacles to their implementation prevent this, including proper investigation, prosecution, protective measures, judicial coherence, capacity and resources, lack of awareness and access to judicial support.¹³

Jad Melki & Sarah Mallat. Lebanon: Women's Struggle for Gender Equality and Harassment-Free Newsrooms. In: Byerly, C.M. (eds) The Palgrave International Handbook of Women and Journalism. Palgrave Macmillan, London. 2013: 432–448 https://doi.

org/10.1057/9781137273246_31 (last accessed March 1, 2022); International Commission of Jurists (ICJ). Gender-based Violence in Lebanon: Inadequate Framework, Ineffective Remedies. Geneva: ICJ (2019).

International Commission of Jurists (ICJ). Gender-based Violence in Lebanon: Inadequate Framework, Ineffective Remedies. Geneva: ICJ (2019): 21

¹³ International Commission of Jurists (ICJ). Gender-based Violence in Lebanon: Inadequate Framework, Ineffective Remedies. Geneva: ICJ (2019).

Perhaps most significantly, there are embedded social, cultural, and religious obstacles, which consider gender-based violence as a social and not legal matter, and manifests in stereotypes and gender-based norms. These in turn affect women's lives in the public sphere, making them believe that they were responsible for whatever misconduct was addressed towards them, but moreover, that it is shameful for them, their families, and communities to discuss or reveal such 'private' matters. "Women are often blamed for being dressed in a certain manner, socializing, drinking alcohol or being out late at night." [ICJ, 2019: 42) So the victim rather than the perpetrator would be investigated, preventing many females from discussing or let alone reporting incidents they experienced. Legally, assault, non-physical harm and harassment are not considered under GBV, hence limiting legal action against them

"Sexual harassment in public places, including on the street, especially when it is being used to intimidate women and girls, threaten them, limit their activities and reduce their presence in the public space, must be adequately addressed through legislative and other measures."

Regarding women and harassment in public space and transport, in Beirut, available documentation by organisations such as UN-Women and NGOs fighting for women's rights are limited to harassment especially in public transport, and specifically towards Syrian refugee women, and foreign female workers. Incidents of theft on streets have occurred, while violence is predominantly domestic, reflecting the limited security of women within the private domain, where the forbidden could easily become allowed, away from public eyes.

Public transportation and women (Mexico City and Beirut)

In Mexico City, the questionnaire survey, 45 responses were obtained, with most respondents aged in the range from 21 to 25. Most respondents were female (about 75.5%). Regarding occupation, most were

International Commission of Jurists (ICJ). Gender-based Violence in Lebanon: Inadequate Framework, Ineffective Remedies. Geneva: ICJ (2019): 42.

¹⁵ International Commission of Jurists (ICJ). Gender-based Violence in Lebanon: Inadequate Framework, Ineffective Remedies. Geneva: ICJ (2019).

undergraduate students with a geographical distribution especially from Mexico City and the mayoralties of Coyocan, Benito Juárez and Álvaro Obregon, that is, which are central areas.

In Beirut the questionnaire survey with 37 responses along with anecdotal evidence reflect the perceptions and experiences of women in the streets and informal bus system in Beirut. Respondents covered different age groups from 17 to 58 and included 10 males and 27 females. Some respondents are unemployed, others students and the majority are employed. All respondents have higher education, and some are still in college. Their geographic distribution by place of residence is in Beirut and its surroundings, or the Greater Beirut area.

In Mexico, the main means of transportation to carry out the main activities such as work, the subway is the main option, only in the case of recreational activities does walking become an option, the same as in Beirut, although in this last case, public transport is used more for activities related to studies, and there is a greater use of the car. At the level of travel times, the interviewees in Mexico City spend more time on public transportation with times ranging from one hour to three hours, in contrast to half an hour to one hour in Beirut.

Among the life experiences in the use of public space and transport, in both cases the condition of being a woman represents daily actions of what the presence of their bodies in public means and the conditions of use such as thinking about clothes. what they have to wear, and that is a concern only of women in both cities. Likewise, going out in public is also conditioned to certain places and times, such as lonely streets, poorly lit areas, neighbourhoods with high rates of violence, especially at night. there is an inherent fear of women in both cities.

In relation to public transport in the case of Mexico City, there is a medium perception, since given the scalar dimension of the city, the social condition and the times of the transfers, public transport in Mexico City is decisive. Even so, they recognize that it is dangerous, that it is dirty and has problems with schedules and stops. In the case of Beirut, the perception is more negative, since public transport is considered a poor service, for this reason it is not the first means of transportation, and there are already restrictions on use, such as where to sit, where to take it and where to get off. Along with the bus, the taxi

is a widely used means of transport in Beirut, although its use is restricted due to fear and insecurity.

Discussion and conclusion

Comparing two apparently different cities has allowed us to open a wide range of reflections and discussions, based on the different forms and scales of violence based on contextual determinants, especially in what it represents for women leaving their homes and using streets and public transport. Bearing in mind that these are two different contexts in social, political, economic, and cultural terms, there are important points of convergence and divergence. From the socio-demographic profile we can already find differences, since for Mexico City most of the interviewees were undergraduate students, in Beirut they were professionals, the age ranges being much more diverse in Beirut. The first fundamental point of reflection is on the ideological construct in Arab countries and women's life circumstances. The perception of violence in space and public transport is much more marked in Mexico City, as well as the circumstances of what it means to have to travel by public transport. Interesting that in Mexico City the majority move by public transport while in Beirut by private car. In this sense, there is an important change in how public practice is viewed and understood, since life both spatially and temporally, is established around the private car in any of the activities in Beirut, contrary to the intensive use of public transport in the City of Mexico. This implies establishing differentiated strategies in the public sphere to safeguard from violence that is exercised in it, from where the bus is taken (in this case), to the periods and ways in which it is used. Although in both cases the ranking in relation to the experience on public transport and along streets is medium to low, here the difference lies in the possibilities that users can choose. There are typologies of streets that are more likely to generate a perception of insecurity, yet this was more evident in Mexico City. Narrow streets, less travelled, less illuminated, generate a lot of insecurity, although the perception between night and day is something important to consider, especially when we take it to the field of design and urban intervention. Likewise, the familiarity that they have with certain areas of the city, especially in their living spaces, also generates a certain feeling of security in relation to spaces with which they

are unknown. This brings us back to the questioning by Blokland: have the social science traditions of thinking in binary oppositions of public or private stood in the way of seeing other assemblages that provide urbanites with sociability and may be social capital? Based on this limited investigation and preliminary reflections, urban design has a fundamental role to play in the disruption between the public and private, which suggests that greater emphasis should be placed on this struggle to gradually break down the resistance between the public and private, patriarchal divide.

Despite the methodological limitations that the reflection of the work has represented, we consider that this preliminary exploration can yield new guidelines to reflect and build new theory on violence in the streets and public transport, understanding this as an extension of public space, as well as thinking about the abolition of the public-private binomial and the delimitation of the borders that organise the roles and stereotypes of women.

This research has limitations such as the data available for both geographical contexts, which prevented cartographic representations of locations in relation to violence, scales and typologies of the street and the impossibility of doing extensive qualitative work. However, building on the framework based on feminist theory, and the modest findings, this article has generated a basis for new approaches that address the limitations and give the possibility of building theory from comparative studies.

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Constructing contested spaces of the public: Exploring published photos from the streets near occupied Taksim square of 2013

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Abstract

This study aims to investigate the role of personal photography as a practice of habitation in the urban public space during the revolutionary actions that took place in streets near Taksim Square in Istanbul in 2013.

Extended collections of technical amateur photos, published at the time of their production, have been called for international awareness of the local battles, in addition to the instant support of their next-door locals. Based on the perspective of Ariella Azoulay¹, who introduces the event of photography, I explored the published photographs, focusing on those depicting the defacement materialities of the public infrastructures which seem to compose a new environment through collective gestures of inventiveness. The images of the city-in-the-making assembled with the contested spaces reveal qualities of urban life that are difficult to sense in the normal urban daily rhythms.

As Stavros Stavrides² claims it is of big importance to try to renegotiate the public character of the city streets through the practices of collective improvisation that inhabit the city as commons. Appropriating the pavement, the road, or the pedestrian area we participate in a collective and social production of the public space, despite its institutional designed arrangements. Personal photography, at that time, established relations of contestation by constructing a shared memory in the public.

Keywords

Photography, public space, social media photos, Istanbul 2013

Prologue

After last year's lock-downs due to Covid19 pandemic, there is in our everyday experiences a profound and bizarre crack in our social lives.

Our everyday routes had been called to sit apart, in a physical distance, and the local authorities called us to accommodate our social interactions digitally. The urban encounters were restricted or even banned through specific governmental orders and manuals of acceptable or not behaviours. The vehicles of public transportation had been filled with our nervous bodies, while the streets and squares had been called to be empty. During the pandemic, a collective need emerged to identify ways not only to survive but also to produce an alternative common life. Dispersed solidarity actions and practices of care appeared at the neighbourhood scale, around the world, and reminded us that "The common emerges as both the form and the content of social relations."1 In the following paper the social role of public spaces is framed as a demand and the practice of personal photography is highlighted as central for understanding the ways in which this is raised as a question. Through the activity of photography and the photographs published during Gezi Park's struggles the urban streets emerged as a field of possibility the whole city to be changed. Their alternative uses and roles, compared to their normative ones, constructed by different groups and individuals that made them possible and we can archive them from their pictures that presented in digital social platforms publicly.

Introduction - Questioning the public space

The movement of the occupied squares of 2011-2013 erupted when mass resistance mobilisations in various cities around the world targeted existing forms of socio-political and economic injustice. The emergence of the many occupied squares, parks, streets and pavements of city centers worldwide made it clear that a transformation of their role had been initiated, rendering them into "urban commons as people assembled there to express their political views and make demands." This common tactic claimed the public space resulting in an intense dialogue -even beyond that of urban space experts — on the importance of the social role of the space of the city. Questions about public space such as "Who owns it? And who can use it?", but also "whose lives will be preserved, protected and valued, (...), and whose lives will be considered disposable and ungrievable", entered dynamically into the public discourse and remain emphatically relevant today.

The role of digital interactions through social media platforms was also crucial during the movement and numerous scientific studies from a range of disciplines (urban and social geography, sociology, political science, anthropology, etc.) recognised them as vital for both the development and the communication and connectivity of geographically distant mobilisations. However, there is an unexplored area of research about the role of the massive use of photographic practice in the context of the movement, which seemed to explicitly aim at transmitting the various, diverse and even shared experiences of the contested urban space. The many amateur photographs taken during the battles and had been published right away to their time of production, claimed a lot of digital space, creating a sense of an expanded shared public sphere, potentially providing an important discourse for the international dialogue of different and almost simultaneous collective actions that claimed urban space in remote locations.

This research contributes, through archival research methods in the photographic material of social media, to the identification of ways of relating the self to the environment of urban struggles. The decision to examine the photos taken outside Taksim Square and Gezi Park - but in the streets near them - was taken to avoid dealing with the wellknown photos that are in a more predictable and safe position compared to the rest of the body of images associated with the movement. This research goes around the perception of photography as a performative practice6 that could have many to say about the contemporary urban habitation⁷ mostly about the habitation of the differentiating urban landscape of the movement. In addition, it pays particular attention to the recognition of popular digital activity relating with the urban struggles in physical spaces, from the found traces of the personal memories of the movement, in order to discuss the contested spaces which challenged urban territories, claimed the public appearance and queried the main core of public space towards a common one.

Practicing photography in public

The starting point of my involvement with personal photography as a means of correlation with the city space is the observation that photographic practice is an increasingly common everyday practice, with the main goal of publishing its results, portraits with a cityscape back-

ground. The discussion around the habitation of the city, the representation, and the experience of its space, can be enriched through the study of the practice of photography and through the research in new media, could derive useful conclusions about the habitation of the public space and the meaning that is given to the public presence.

The public in public space

Hannah Arendt – political philosopher – argues that the term *public* contains on the one hand the phenomenon of publicity. She argues that "The presence of others who see what we see and hear what we hear assures us of the reality of the world and ourselves." On the other hand, the term *public* refers to the whole of the common world of human affairs, that is, the world we share. She continues as follows:

To live together in the world means essentially that a world of things is between those who have it in common, as a table is located between those who sit around it; the world, like every in-between, relates and separates men at the same time.⁹

The siting at a table as the thought-image in search of the constructed social norms of urban interactions has been commonly used. Richard Sennett¹⁰ -sociologist - refers, similarly, to a necessary distance from the direct observation of others, which human beings need in order to feel socially. Social media interactions during the occupied squares movement, seemed to serve as a new field of exploration of sociality that would allow a sense of proximity relationships to be constantly negotiated. The constant change of the participants' roles in relation to the actions in the physical space, at one moment they are engaging in actions on the field and at the other they are distant viewers of their representations, probably creates a corresponding sense of publicity which manages to create a common perception of the shared experiences in the insurgent city.

Photography as a practice

Photography as a practice appears in a distinct line of thought, starting from the work of Susan Sontag¹¹ -journalist and writer- who observes an active voyeuristic and hunting attitude of those who hold a camera in their hands, and Ariella Azoulay¹² - theorist of photography

- who argues that the photographic event consists of a network of relations, in different spaces and times, at one hand on the camera's operations and at the other on the viewing of the photograph. During our times both of these arguements make a lot of sense, but even now, when almost everyone can hold a smartphone, take a picture and then instantly disseminate it to a digital public audience, it is still shadowy the impact of these gestures in our connection with the urban life. At the same rate, if someone around capture our figures inside their frames, we are likely to demand the right to be informed about the faces captured and even more so to be published.

For Walter Benjamin¹³ – philosopher and cultural critic – photography quickly became associated with a mystical value. As he argues, looking at the photographic image, one looks for traces of the real that has been escaped, traces that testify to the *optical unconscious*. Clues that suggest that something was there, hidden, unnoticed. The person depicted in the frame may betray a dimension of truth that at the moment of capture may not have been ready to be communicated.

In these times when photography has become an everyday popular practice, the connection with the content of an image seems to have lost that mystical quality. Images appear to work through commonly understood symbolic shapes to interpret a version of the world, which usually incorporates the prevailing –at any given time– dominant perspectives. Even when the professional photographers, as Sontag claimed, having in mind "mirroring reality, they are still haunted by tacit imperatives of taste and conscience." However, into the everyday snapshots, there is an expectation for traces of our relationship with space to be found there, that are considered more pure, or innocent, or honest compared to professional images that are by nature constructed under a broader conceptual theme.

Habits, everyday practices, micro-behaviours are spatially manifested, leave traces, or are defined by the material space in a way that is often hidden. Michel de Certeau¹⁵ – philosopher – characterises these practices of everyday life as often invisible, sometimes clandestine, operating with deviations and tricks difficult to detect. Photography is framing the events, helping to spatialise¹⁶ moments of these practices, their forms of expression, by capturing the composition of their materialities.

The current research investigated personal photographs rather than institutional media reports, most of which present iconic battle scenes and are usually anticipated before they are even taken. Through the published amateur photos, the background of the movement has been considered to be revealed and resistance scenes taken from the street level it is believed to include those clandestine practices in secret moments, usually moments of preparation, practices that may be considered unworthy of being photographed. Bearing in mind, that photographic images are not only traces of the reception of the experience but also form themselves, through their publication, the criteria for which experience is worth representing¹⁷ and consequently lived. The many published urban snapshots of the occupied squares movement did not function only as gestures of call, inviting newcomers to the field. Their digital appearance structured a place of certification for the urban struggles to refer and globally exist and mostly functioned as another de-design¹⁸ action that inquired the familiar in the urban life.

Archiving the social media photos

The social-photo

Starting this research on social media platforms, it quickly became apparent that as the years go by, the more complicated the process of finding photographic reports from the field will become. The initial and main challenge of this research is the vulnerability of the sources to be searched, the published amateur photographs. The issue of the poor technical image lost in the bottomless pit of information on the Internet is an issue well noted by Lara Baladi¹⁹ -photographer and archive artist- who considers it highly precarious to attempt to rely on it. However, in the current research, the operations of the low-tech image constitute the main -at the same time a non-existent - pathway to be explored, and its vulnerability is not considered to be a barrier to reaching adequate and useful conclusions. The formation of extensive digital collections of technical images, which are shared daily on social media -mainly on the Instagram platform- is a contemporary phenomenon, studied by various scientific disciplines, with different -quantitative and qualitative- methodological approaches. Lev Manovich - social researcher of new media - in his e-book Instagram and Contemporary Image, points out the massive use of digital tools and platforms to create and share sophisticated cultural artifacts by millions of people around the world. He uses the Instagram platform "as a window into the identities of a young global generation."²⁰ He describes his primary guiding intuition as:

(...) studying not only contemporary global photography, but also contemporary global cultural evolution and dynamics in general. As the medium of choice for the "mobile" class of young people today in dozens of countries, it provides insights into their lifestyles, imagination, and the mechanisms of existence, meaning creation, and sociality.²¹

Social media platforms

Social media platforms did not operate at a similar pace to each other. They contain different possibilities of sharing their materials and different possibilities of classifying them. An overview of outcomes from the research in platforms is showing clearly that each one played a different role in the distribution of the images. They accepted various thematic dynamics within the frames in combination with diverse arrangements of their shooting. Three were the research tools used to find the photographic materials on social platforms, their published reference location, the accompanying keywords/hashtags, and the date of publication. The analysis of the published images is usually done by searching for specific words -hashtags - that are linked to the images as tags. According to Benjamin²², a crucial factor for the reception of the photographic image as information was the illustrated press. The illustrated newspapers set up the first signposts for the confrontation and conceptual reception of the photographic representation. These signposts, according to him, were the captions, which dictated the way in which each image would be understood. When these captions are inserted by the photographers themselves, the images are somehow protected from potentially unwanted uses. In the age of Instagram, hashtags set by the creators of the posts respectively secure the conceptualization and possibly reveal the intention that the photographer had during their practice. It also puts the image inside a continuing growing collection of images linked with the same tags. Classifying photos on social media based on their hashtags is an existing trend in

research, but according to Manovich, it involves the mistake of treating people who share images as having a homogeneous motive. Instead, as he rightly points out, the subjects who produce them and the aesthetic outcome of these images are quite influenced by the social, cultural, and aesthetic criteria and values of the location in which these images are produced.

Therefore, the published label of the location -location tag- of the published photographs constitutes the primary tool for this study that is *Taksim Square* and *Gezi Park* in Istanbul. Consequantly, the second research tool is hashtags which name the location in combination with words that are often used to refer to the occupied squares movement, as well as words used exclusively for the protests in Istanbul, namely #direngeziparki, #occupygezi. The third research tool is the timing of publications, which is considered essential as it is read *for direct access*. The relatively rapid sharing of images – the closer the timing to that of their production – is quite possible to bring about meanings such as "it is happening now" and "we are still here", which are likely to lead to useful conclusions about the role of photographic activity.

On the platform of Facebook really few shared pages were noticed. The one with the name "Diren Gezi Parkı" stated its purpose to share the news are not covered by the mainstream media during and after the Gezi Park demonstrations. There have been images in folders mostly reporting events of battles in both big and small scale. The images mostly have been taken as snapshots, on the go. On Tumblr, a few more accounts for sharing pictures have been traced. Some of them, again with the purpose of overcoming mainstream media, succeeded to host extensive collections of images and all kinds of visual materials, and themes, also allowing users for a quick and anonymous exchange of images on the move. On the Flickr platform, many individual images and albums tagged "occupygezi" can be found. The most common theme in these images is moments outside the battles and alternative arrangements of urban infrastructures. On Instagram, we can find several collections of hashtagged images that many users had fed with their personal photo posts. The most used hashtags are "occupyistanbul", "occupygezi", "direngeziparki", "occupytaksim". There are also hashtags that refer to other citys such as "occupysaopaulo", "occupyvienna", "occupylondon", "occupynewyork" and other refer to specific actions which were easily reproduced in different locations such as "duranadam", "standingwoman". On Twitter, we can find really few hashtagged images of iconic moments of protest that are usually massively re-shared.

From the hashtag collections to archival acts

The current research contributes with an archival classification of the materials found, which does not emerge either from the quantitative factor of general thematic interest or from a previously structured theoretical construction that needs to be confirmed. The classification method points in the observation of meaning-creation tactics of photographers. The hashtag research method seems to include a conscious decision around these tactics but is also considered as a not quite reliable factor to rely on. The classification follows the identification of the different spatialities manifesteted and presented in social photographs. According to Azoulay²³, social researchers and artists are often claiming the right to the photographic archive, its reconstruction, distribution, and appropriation, as a mode of intervention and as a revolutionary demand for a different understanding of the documents from which it is constituted. The example of the occupied squares has also been used to attempt archival artistic practices of post-production and analyses around the role of the archive as a practice of emancipation of people "from below." 24 I chose these themes that seem to reveal a connection of the self with the urban environment which are the portraits against the background of the re-appropriated public spaces. I also choose to pay close attention to the different types of spatialites that seem to have appeared and are depicted in the frames.

The spatial relations inside the frames

The various and opposing perspectives –also literally– from which the city is often represented provoke scholarly debates in the attempt to understand urban planning as an act of critical social impact in urban studies²⁵. Examining the materials found, the need arose to identify patterns that could reveal the various operations of the photograph makers, in relation to space. These operations usually exist in an

unregocnised sphere, appearing as if they were obvious reactions during the evolving times of spectacular events. Either were reactions or not, the photographic enactments included some decision-making taken instant and at the field which give spatio-temporal testimonies. The vast majority of the photographical themes were about crowded, battle-filled spaces, streets with barricades, collectively formed structures, close-up shots of faces beaten, and iconic moments of resistance. Their shooting modes were either stills from above, capturing the extended landscape, or close-ups from the street level. The photographs of the moments of tension were taken in motion, while the photographs that referred to an alternative view of the city space and a personal relationship with it were taken during times which seemed empty of conflict, with posing operations.

The portraits of the appropriation of change

As Walter Benjamin²⁶ reminds one to consider, until the spread of photography, very few people ever saw their name on print. The portrait of a person became a formidable object which confirmed a physique, a blurred figure, capturing the light forever upon it. Until these days, the portraits contain a special power of relating the self with the other and constituting a strong affection mechanism. The representation of the self seemed to took a crucial role in the distribution of the shared urban experience during the struggles too. Many were the portraits in front of unfamiliar arrangements of urban infrastructions, directing attention to the outputs of the defacement acts that took place there. The frames depict various elements, not all of which seem to have been selected for representation. Ephemeral micro-structures such as unfinished barricades, leftover materials for protection against tear gas, defaced pavements and roads were placed inside the fast-decided photo-frames. The experience of the defacement of urban infrastructures gave the impression that it has created cracks in the previous well-known recognised perspectives of the image of the ideal space of the city. As Stavros Stavrides – architect and activist – well notice:

If we consider that public space is perceived as a meaningful social artefact through stereotyped images that fix and reproduce its meaning, then defacement practices directed against the recognizable mate-

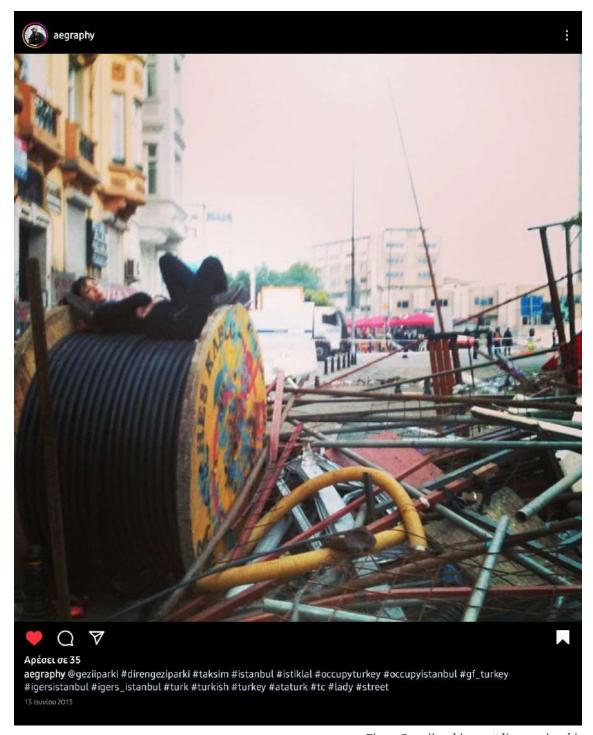


Fig.1 @geziiparki #direngeziparki #taksim #istanbul #istiklal #occupyturkey #occupyistanbul #gf_turkey #igersistanbul #igers_istanbul #turk #turkish #turkey #ataturk #tc #lady #street - Source: Arda Ergün, Instagram. June 13, 2013

rial support of these images can produce collective memory shocks.²⁷

These memory shocks, which were undoubtedly created during the occupied squares movement, seemed through this research to be still active today. Many of the above portraits but also informal landscape photos -which may have the meaning "I was there too" - from the movement's days were identified as being re-posted at times later. At anniversary dates but also at dates of new urban struggles users of the platforms posting their images taken on days of 2013 battles and connecting through hashtags their previous with the contemporary experience. This finding suggests a personal need for memory that is desirable to be shared publicly and reconnected to the struggles of the past. The role of the image as memory has been beautifully approached by Roland Barthes - philosopher and semiotician - as goes beyond a nostalgic one. As well written, "The Photograph does not necessarily say what is no longer, but only and for certain what has been."28 These postings seem to relate to distorted urban spatialities, restoring their social role in the specific historical context.

The inhabited spaces within the frames

The varying spatial arrangements and unexpected dispositions within the amateur photographs' frames create a sense of capturing the performative elements from which these contested spatialities are produced. The invented or inhabited spaces as the products of the performative urban practices can be seen through the following three spatiality lenses.

The space as contested territory

Firstly, the biggest amount of the previously selected materials are depicting the differentiating of the urban landscape. Defacing the official urban landscapes is a common tactic in urban struggles. Specially as David Harvey well noted "The street is a public space that has historically often been transformed by social action into the common of revolutionary movement". Even if one considers that the smallest in time disruption of the usually massive mobile traffic in any road or street it is capable to insatantly turns the passageway into a new full of possibilities staging ground. The defacement of the materialities of the













Αρέσει σε 30

stereopathetic #direnistanbul #occupyistanbul #bw #urban #urbanphotography #ulucozcu #stereopathetic #jj #jj_forum #webstagram #bestoftheday #photooftheday #instagram #instagramhub #insta #instahub #instaaaaa #instafamos #instacool #instamood #lnstagood #igersoftheday #igersistanbul #igersmania #igers #instagrammers #iphonephotography #iphoneonly

13 louviou 201

Fig.2 #direnistanbul #occupyistanbul #bw #urban #urbanphotography #ulucozcu #stereopa-thetic #jj #jj_forum #webstagram #bestoftheday #photooftheday #instagram #instagramhub #insta #instahub #instaaaaa #instafamos #instacool #instamood #lnstagood #igersoftheday #igersistan-bul #igersmania #igers #instagrammers #iphonephotography #iphonography #iphoneonly - Source: Uluç Özcü, Instagram. June 13, 2013

city, such as the pavements, the streets and other urban infrastructures were found in the foreground of the emerging reinterpretations of the city, not only as results of the need to secure a safe territory for the protest to exist and transforms the space as a zone to defend. they also are perceived as collective actions of transformation and change.

The space as presence

Secondly, many depicted actions targeted the role of presence in the physical space. The power of the body itself to claim public space emerged through an iconic and easily repeated action – like a meme – with the name *Duran Adam* (Standing Man). The core structure of the action refers to a body standing still in the battlefield claiming just the space of its stasis. Corresponding appearance actions were the rituals of mourning for those fallen in the battle. Small scale and ephemeral structures of memorials emerged as part of the need to perform grief and as a demand for their just presence in the city's memory. As Susana Torre¹ – architect – claims in her analysis around the repetitive public action of mothers in Plaza de Mayo, the role of physical presence in public space is in question, the social dimension of architecture is displayed, and demands for a public sphere are reformulated that the buildings themselves, without the social actions, cannot put forward.

The space as common

Thirdly, the many snapshots showing a new scenography of public space, functioned as an open call for participation. According to Dimitris Dalakoglou¹ the new reconstituted spatialities of the movement reinforced the sense of an 'openness'. The new infrastructures in the open central public spaces introduced new aesthetic and morphological characteristics which, as he claims, no one can recognise and thus everyone can relate with under the new conditions that the movement sets. Not forgetting that these strange infrastructures appeared by and for the many. Even if some of them were personal, specific and spontaneous gestures, it was clear that they contributed to a wider scene of actions aimed at discovering the new possibilities of urban co-living. As Stavrides² rightly points out the collective and social production of the public space through defacement actions of renegotiation inhabit the city as commons. Building a castle with a few sidewalk blocks in the



selinozaydin #direngezi #direntaksim #direnturkiye #occupytaksim #occupyistanbul #occupyturkey #turkey #taksim #istanbul #turkiye #unutmiyacagiz #mum #candle #instanight #revolte #soir

14 louvlou 201:

Fig.3 #direngezi #direntaksim #direnturkiye #occupytaksim #occupyistanbul #occupyturkey #turkey #taksim #istanbul #turkiye #unutmiyacagiz #mum #candle #instanight #revolte #soir - Source: Selin Özaydın, Instagram. June 14, 2013

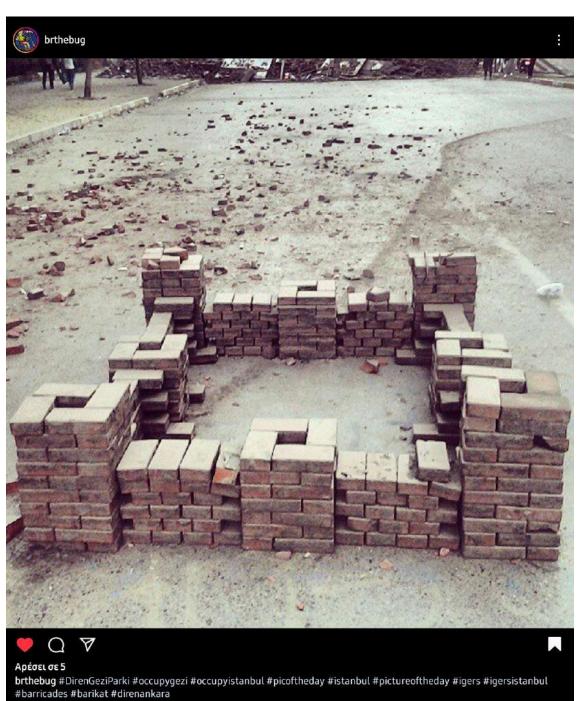
center of a city street creates a promise that new modes of urban habitation are to be explored.

Conclusions

The initial research idea was based on the belief that traces would be found in the published amateur photos, traces that reveal the experience of the inhabited space and the meanings invested in that experience. It was also accompanied by the principle that space does not exists in itself, it is not a container in which our life flows. Instead, it is shaped by the relationship developed with it, that is, by the meaning that is given to its habitation. The practice of photography has been read as an action of inhabiting the differentiated urban landscape, enabling possibilities of forming relationships that go beyond previous experience.

In the field of the movement's amateur photography it seemed like people cherished to be seen in pictures, so as they looking straight in the lens smiling and most of the time making the victory's hands gesture. Viewing many repostings of these days later than the movement's times gave an evidence in the impact of the significant memories that are seeked to stay in memory. A need for personal memory in public has been found through the posts and re-posts of the portraits in the platforms. The public space of the city has been founded as distorted through practices of challenging territories, reclaiming the bodily presence and its role as a space of common.

The future goal of this ongoing research is not only to gather knowledge about the object of study, but also to deepen this knowledge about the city's contemporary experience for the creative engagement with architectural and artistic education and practice. Before designing architectural spaces, it is crucial to recognise what makes a space habitable, to study habitation as a socio-spatial activity, in order to then propose a composition of materialities. Embodied actions of appearance could be perceived as gestures of dwelling, raising questions around the notion of the public in public space. The contested urban spatialities created collective memory's shocks that could allow us to imagine new possible and more just¹ socio-spatial negotiations for our contemporary everyday life.



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Fig.4 #DirenGeziParki #occupygezi #occupyistanbul #picoftheday #is-tanbul #pictureoftheday #igers #iger-sistanbul #barricades #barikat #direnankara - Source: the bug, Instagram. September 22, 2017

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Negotiating a Place in the City: Street practices in Beirut during Emergent Times

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Abstract

Beirut is a city that has undergone continuous physical and social transformations triggered by unfortunate events and often-destructive urban policies. Thus, it has always been depicted through various landscapes of deserted streets. Despite the recurrent tragedies, different cases of urban engagement emerged during the time of crisis. This research seeks to understand how the emerging dynamics on the streets during the outbreak of the coronavirus pandemic and just after the Beirut port explosion influenced a new pattern of collective engagement in the city and triggered productive opportunities to be together. The paper first situates the two events at a major turning point in the history of the country and then adopts a political and socio-economic analysis of the surveyed sites that includes an engagement with the people and the processes that are producing the place. It argues that by conforming to different paradigms of collective social contracts, people are able to increase the effectiveness of the street in response to conflicting needs and pressing demands and could ensure some sort of fairness and urban vitality. The research concludes that these practices have a unique and non-replicable character that could not easily inform a general urban policy; however, the notions of self-governance appear to be more than ever as a legitimate framework through which urban residents reclaim their neighborhoods.

Keywords

Beirut, Pandemic, Port Explosion, Street Appropriation, Self-Governance

A history of the street as a public space in the city

For centuries, the transformation of Beirut followed a spontaneous process mostly driven by necessity and function. Urban form evolved freely without subscribing to any overall scheme emanating from a political or military authority. The city was made by itself - free from any dominant concept or systematic principles of planning. The resulting fabric was described by May Davie¹ as an extreme entanglement of dwellings associated with a complex system of narrow alleyways. Streets were rarely straight and were characterized by twists, inflections, and sharp angles. The successive narrowing and widening of the streets resulting from the encroachments of the dwelling units largely determined their width and profile while the overhang of the houses protected them from the sun. The streets were most of the time crowded with people, merchant stalls, donkeys, and mules transporting people and goods. There was no space for vehicles or primitive carriages. As for public spaces, they did not look like what we see today - formal geometric spaces that are clearly recognized within the urban fabric. They were often confused with the labyrinth of narrow streets that ran through the old town. Enlargements of a few meters accommodating a particular function or daily activity and usually covered by stretched fabric were referred to as al-sahat. These particular configurations often represented an extension of a café or a boutique or were occupied by a refreshing water fountain. Picture-shows (Sandoug al-firje), shadow-theatres (Khayal al-zhil) led by a Karakoz, and most notably storytellers also known as Hakawatis, were famous for their dramatic street performances and were paid by owners of coffee houses to draw kids and customers in the afternoons.2 There were no clear physical demarcations for these places and they were always negotiated, fought over, and resolved through challenging demarcations along socio-economic divides.

The understanding of public space in a straightforward opposition to the private has always been challenging and often contested in Beirut

May Davie. Beyrouth 1825–1975 un siècle et demi d'urbanisme. Beirut: Publications de l'Ordre des Ingénieurs et Architectes de Beyrouth, 2001.

² Samir Khalaf. *The Heart of Beirut: Reclaiming the Bourg.* Beirut: Saqi Books, 2006.

and other traditional Arab towns. In 1925, the French colonial mandate in Syria and Lebanon embarked on a challenging mission to develop comprehensive cadastral systems in the area. As a result, self-policed and locally maintained semi-public alleyways were classified as domaine public.3 While this normative process emerged as a tool to bring all spaces of the city under the watchful eye of the state, it has also deeply affected the post-colonial construct of the public, as an iconic urban space imbued with aesthetic and symbolic values. It is important to remember that "public spaces" in traditional old towns were nestled in dense and intricate residential areas and were characterized by their multi-functionality. They were never considered as a stage for official and military parades or a monumental representation of power as was the case in the colonial countries. Despite the efforts to codify the land property and the inherited post-colonial understanding of public spaces, local communities in Beirut rejected such demarcations and their resulting urban forms and continued to encroach on semi-public spaces and alleyways in the city with considerable social tolerance and support⁴. The streets continued to be the main place for encounters, exchange, discussions, and protests despite the transformation of the urban fabric and the westernization of the lifestyle in the city.

(Physical) Destructions, Re-constructions and (social) Disruptions

In 1975, the Lebanese civil war broke out as a consequence of the deterioration of the state and the rise of armed militias in the country. The war lasted for 15 years during which urban warfare and street fights redefined life on the streets of Beirut and other cities, given that the main targets were located in urban areas. The battles that took place in the capital heavily damaged its built fabric and displaced its

³ Syria Lebanon codes 144 (1925) 161 (1926), 186 & 188 (1926)

Abraham Marcus. The middle east on the eve of modernity: Aleppo in the eighteenth century. London: Taylor & Francis, 1989.

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residents. Physical and mental boundaries emerged on the edges of the streets of the divided city, imposing a new geography of fear on the ground and alienating people from their streets. Population displacement and the regular influx of newcomers changed the social composition of the entire city and created tensions between its residents. As a result, the usual intra-quarter communications were disrupted and land use on the street level was drastically transformed.

At the end of the war in 1990, the Lebanese were looking forward to the opening of the country to all of its citizens and to seeing the heart of the country revived. Unfortunately, the destruction of the war was not the only damage caused to the city: immediately after the signing of the Taef agreement, the reconstruction project of the city center -Solidere, was launched. The area of the souks was demined then leveled overnight under the excuse that it could not be repaired and so were demolished many other vestiges from the past. Solidere tailored a historical narrative that suits its commercial objectives. The result was a pastiche of iconic representations limiting the definition of historical associations to the appearance and aesthetics of the façades and reducing the city center to a piece of property or a share for a very privileged few⁵. Furthermore, the heart of the city has been amputated from the urban fabric and the geographic location it belonged to by building a massive infrastructure of high-speed roads around the newly proposed Beirut Central District.

"...The heart of the city seemed to have surrendered completely to the neo-liberal model, leaving no room for people-centered processes and replacing the 'real city' with a speculative bubble. The identity of Beirut Port City has been completely obscured by the post-civil war reconstruction. The outdoor markets and local coffee shops that once greeted visitors from around the world have disappeared. The sound of random bargains and the smell and taste of the spontaneous sharing of food on the streets have also vanished. An induced anesthesia overwhelms the city that no longer speaks a recognizable language. Solidere's final outcome is a pro-

Roula El-Khoury & Paola Ardizzola. From the port city of Beirut to Beirut central district: Narratives of destruction and Re-Constructions. SPOOL. Port Cities: Historical Urban Narratives and Contemporary Design Approaches, 2021.

ject that is not able to reflect the process of urban change, in which there is no room left for openness, un-finished works, heterogeneous spaces or otherness within the Beirut Central District." (R. Khoury & P. Ardizzola, 2021).

In fact, The Post-War Reconstruction Era was influenced by the changing world order and the rise of globalization. The increased importance of the banking sector, the real estate sector, and the capitalization of the economy in the 1990s, were directly reflected in the image of the city and the life on its streets. The city was reduced to a mere propaganda image for the dominant political and economic order. It became a reflection of capital flows and investments, prioritizing anonymity over sociability and quick money speculation over long-term human relations.

However, the major disruptions on the streets caused by the war and the reconstruction could not completely halt the activities of the residents nor prohibit them from fulfilling their daily needs. While the war transformed people's daily rituals and relationship with the city streets, negotiations and time-sensitive deals continued to occur among the people as a response to the uncertain and violent events that were taking place. These events revealed how the city and its residents gradually adapted to new conditions during relatively long periods of crisis. This paper, however, focuses on emergencies that took place suddenly and unexpectedly, and people were still able to adapt and react to the resulting changes and disruptions.

In October 2019, massive and angry crowds marched on the streets of Beirut, filling the streets and the empty squares. The demonstrations spread quickly across the entire country, claiming the demise of the ruling political system and asking for change. The protests became known as the October 17 Revolution and lasted for months during which protesters attacked every form of representation that served as propaganda for the dominant and political actors. The city that was once divided along religious and political demarcation lines, and continues today to be characterized by discrepancies and inequalities between its

⁶ Roula El-Khoury. The Role of the Banks in shaping the Image of the Neo-Liberal City. Brooklyn says:" Move to Detroit",105th ACSA annual Meeting, ACSA Press, New York, 2017.

inhabitants, has suddenly come together as a result of an unprecedented economic collapse. During these few months of uprising events – demonstrations, road closure, and strikes, a spontaneous collective approach to dealing with everyday problems and needs were observed across the city and the entire country.

Cooperation at work supported by social tolerance and understanding has surfaced in no time as a reaction to a sudden and severe situation despite the differences and sometimes conflicting interests. A new type of public space, defined by social contracts and self-governance principles emerged. These spaces appear to be very diverse yet they are clearly characterized by their social and temporal nature while completely freed from any form of a spatial or legal framework.

Local agency and Self-Governance on the Street during a Time of Crisis

The following section examines more closely urban practices that have emerged along the streets of Beirut during the outbreak of the coronavirus pandemic and just after the Beirut Port explosion, two events that have further exacerbated the economic recession and social distress in the country. It focuses on how people adapt to cases of extreme emergencies through improvisations, negotiations, and creative solutions. It is important to note that this research is focused on streets and places classified as "domaine public" on the cadastral plan of Beirut and expands the observation field to the sites directly adjacent to them in an effort to understand the emerging social practices beyond the abstract representation of the legal framework and the ownership pattern. The paper also acknowledges the historical appropriation of the street in Beirut manifested under 3 main categories: the street as an extension for the private domain, the street as a catalyst for vital activities and businesses, and the street as a recreational space. Through the below-selected examples, the paper aims at highlighting the different paradigms of collective social contracts that people have subscribed to in order to increase the effectiveness of the street in response to their pressing demands and in spite of their conflicting interests. By highlighting the positive character of these practices, the paper hints at the fairness and urban vitality that the residents of the city could bring to

their neighborhoods, especially in the absence of any government initiative to relieve the population during a period of severe distress.

The Surrender of the Material in an Exchange between the Private and the Public.

A distinct case of urban engagement appeared on the streets of Beirut in the first few months following the Port explosion, one that redefined the boundaries between the streets and the buildings around them. While basic architectural elements— the walls, the doors, and the roofs, usually define the enclosure of a house, they often cannot describe a clear demarcations between the inside and outside, the unshared and the collective, and the house and the city. The combination of these elements along with the social practices that develop around them draw new boundaries that shift and keep redefining the realm of the private and public. In fact, this phenomenon attained a new meaning in the aftermath of the port explosion. The Beirut blast destroyed, fragmented, and exposed the buildings in the area. It erased the physical elements that demarcated the inside from the outside, turning the ground floor of the house and the streets of the city into one homogeneous and uninterrupted entity.

This fundamental shift made it increasingly difficult to recognize any boundary at all. The private life of the home was carried out into the public sphere, and the dangers of public life (theft, intrusion, vandalism, etc.) were brought back into the home. Strangers gained authority over private spaces, walking through them and inhabiting them freely as though they were natural extensions of the streets. Consequently, homeowners had to transfer the role of sheltering to a *custodian* (a doorman) or otherwise rely on thin envelopes of plastic bags to guard their belongings. The inanimate boundaries (walls, doors, roof) were replaced by a human agency, the space no longer being defined by physical elements but by the extent of the eyesight. Thus, the task of ensuring safety was assigned to those eyes upon the street, and public peace was "kept primarily by an intricate, almost unconscious, network of voluntary controls and standards among the people themselves, and enforced by the people themselves.". 7 The remaining buildings in the city served

⁷ Jane Jacobs. The death and life of great American cities. New York: Random House, 1961.



Fig.1 - Damaged streets on Gemmayzeh as a result of the Beirut Port Explosion - Source: Yasmina Hilal, pending Author permission 2020

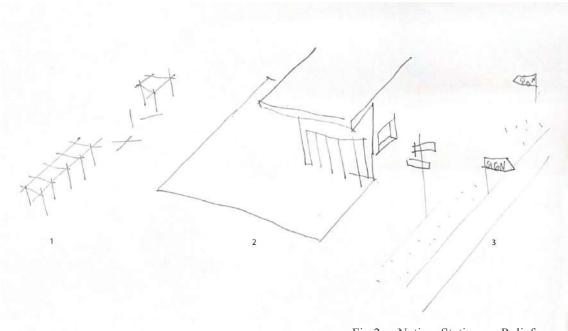


Fig.2 - Nation Station, a Relief center on Geitawi Street – Source: Author 2022

as sites for this act of safeguarding as they deteriorated into nothing but simple highrise structures that acted as watchtowers.

Following these events, the inhabitants of the city left and were replaced by strangers who formed a collective of custodians aimed at bringing back peace and safety to the city. Doorkeepers, construction workers, medical staff, and volunteers temporarily upheld the negotiations on behalf of a distressed population. The network that emerged to reconstruct the city was intangible, carried through spontaneous activities, and far from any physical demarcations or formal policies.

The street as a Catalyst for Productive Opportunities and Places

With the deaths of over 200 people, the wounding and sudden displacement of thousands of others, and the damage of approximately 77,000 apartments, there was a pressing need for an emergency response plan that the Lebanese government could not provide. The streets were the most natural place to host the various relief efforts that were established in response to the explosion because of their ability to reach and connect people and places. Volunteers and non-governmental organizations set up aid structures along the streets in the main affected areas of Karantina, Geitawi, and Gemmayze. There were different forms or typologies to establishing these community relief centers. Some organizations deployed new lightweight and dismantlable structures along the sidewalks. This kind of response was temporary and aimed at providing quick and urgent supplies like food and medications. The structures were often displaced to target crucial locations and were disassembled once their purpose was complete. Thus, this kind of approach represented a mobile and temporary appropriation of a portion of public space, which in this case is the sidewalk.

Other initiatives inhabited existing structures in the city, readapting them to fit the new and urgent needs of the community. One example is Nation Station, an adaptive re-use of an abandoned gas station in the neighborhood of Geitawi. Volunteers first set up a hot meal kitchen, and a spot to drop off clothes, fruits, and vegetables for donations. After months of providing emergency relief, volunteers adapted the remaining spaces of the station into a micro-clinic, a community center, and an urban garden to continue to provide sustainable solutions to the

growing needs of the community. The typology of the gas station and its relation to the street enhanced its effectiveness and its reach to the residents of the neighborhood. The fact that it is a stand-alone structure, with a distinctive canopy and bold signage, makes it visible and attractive to passers-by who need to locate it easily. Moreover, it is set back from the street, allowing a large group of people to gather in front of it, and it contains a lot of enclosed spaces that had been designed to fit a deli or a grocery shop or a small office for the station, but that could now be repurposed into the different spaces a relief center requires.

A third format for setting up these aid centers consisted of inhabiting vacant plots in the city while having a representation on the street to direct people towards the location. In this example, the boundaries between the public and private are fluid and shifting, the former permeating the latter or vice versa. Some of the vacant plots that were being appropriated were essentially private, but they were not being used by the same owners. The private also spilled over the public with the NGOs' representation on the street, be it a person or an object used to guide people towards the center. This constant reciprocal exchange between the two modes often creates tolerance since it leaves space for actions to take place outside of what is "accepted" for the sake of the community.

Recreation through Transgressions on Formality

Another pressing need was access to public spaces and playgrounds for kids in the city, especially as a relief from the pressures of the epidemic, confinement, economic collapse, and trauma caused by the explosion. With the closure of public green spaces such as parks, playgrounds, and gardens during the pandemic, new practices emerged to defy these restrictions and access play. Children began to explore new places and patterns of play that centered around the streets and on the edges that delineate them from the parks. Some attempts to access play included trespassing physical boundaries, violating safety measures, minor acts of vandalism, as well as negotiations and deals with the municipal guards. Alternative play areas and playtimes redefined the fences of the parks as their central masterpiece, re-questioning the physical boundaries and the role of the guardian (El-Khoury, 2020).



Fig.3 - Nation Station, a Relief center on Geitawi Street - Source: pending Author permission 2020

While some of the kids turned the guard into an accomplice and were able to persuade him to let them in for a limited period, others learned how to find ways around the park. In one instance, a ladder was placed on the sidewalk near a closed school in Hamra in order to cross over the gate and access the playground. Meanwhile, in a small park in the Qasqas neighborhood, children were simply capable of climbing over the fence.

Other times, children abandoned the enclosed parks entirely and spread out across the street. The temporary halt of activity caused by the confinement and by the explosion pushed vehicles to the periphery, inviting these children to occupy the larger portions of the streets. The existing infrastructure and topography of the streets replaced the fancy toys of the parks. A hill near Qasqas street served as a big slide, while a series of wave breakers placed along the waterfront acted as a fortress. Alleyways hosted football matches and streets closed off by rubble from the explosion were filled with cyclists and pedestrians. The significance of these instances does not only lie in their temporariness but also because they elicit the value of the streets as a public space in the city. The experience of inhabiting newly safe streets may develop an informal sense of ownership or belonging within citizens, and that ownership could in turn challenge the traditional expectations about how – and for which users – urban space and infrastructure should be planned and regulated. This essay does not intend to idealize these practices nor to portray them as fostering a healthy recreational environment; however, it highlights the pressing need for spaces of expression in a country where public spaces, as well as publicly owned land, are designed in ways that exclude their citizens, especially the poor and the working class.

Conclusion

This paper examines the conceived or produced spaces on the streets of Beirut during a period of unprecedented events and utmost emergency. The residents and visitors of Beirut have been observed while attempting to accommodate their urgent needs and the essentials of their daily life by conforming to different paradigms of collective social contracts, negotiations, conflicts, resolutions, and shifting boundaries.



Fig.4 - Ladder giving access to closed school playground around Hamra and kids playing in the background - Source: Author 2021

While some of these <u>practices</u> and tactics are commonly observed in neighborhoods referred to as informal, they are less visible in areas of the city where spaces are well defined and organized. This paper brings together different cases of engagement on the streets in an attempt to better "understand" the informal mechanisms but not necessarily to depict a holistic understanding of the city during this period of crisis.⁸ This method is particularly relevant in uncovering tolerance and cooperation at work during times of economic, social, and psychological distress.

The study briefly identifies the challenges that emerged in light of the coronavirus pandemic and the Beirut explosion and it highlights the different opportunities that resulted in appropriating the streets creatively. It also acknowledges their unique and non-replicable character. Shedding the light on these examples does not necessarily mean to praise their temporality, their uncertain character, or their imposed power dynamic; however, it draws attention to their organic nature while investigating the relationships between the public and the private, the legal and the informal, the man-made and the natural. In the absence of their basic needs and access to public spaces, communities in despair transform these binaries into productive opportunities to be together and participate in making/re-making the city.

The informal arrangements observed during particular times on the streets render these spaces multifunctional places rather than merely a passageway. They increase their effectiveness in response to conflicting needs and pressing demands and could ensure some sort of fairness and urban vitality. Observed tactics and strategies required basic negotiation skills, small gestures and/or the deployment of loose parts/movable items. The specificity and uniqueness of each intervention could not really inform a general urban policy however, it has become obvious that the notions of self-governance at a neighborhood level and time-sharing should be legitimized in an attempt to build capacity and activate change... or at least reclaim our right to the street!

⁸ Hans-Georg Gadamer. *Truth & Methods.* Journal of Aesthetics and Art Criticism 36 (4):487-490 (1975)

⁹ Roula El-Khoury. *Looking for the liberal in the neoliberal city: Alternative public spaces from Lebanon.* Urban challenges in the globalizing Middle East" The urban book series. Springer, 2021.

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Reconnecting rural heritage in Cerro al Volturno: strategies for inner areas

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Abstract

This paper is rooted in a research focusing on the territories of the Italian Inner Areas which, according to the National Strategy for Inner Areas (SNAI), consists of fragile landscapes laying distant from the main centres offering essential welfare services. It's 60% of the Italian territory where a quarter of the national population is living. Among the four inner areas in Molise Region, the one with the highest ratio of SNAI-areas to the whole regional area, "Mainarde" inner area partially intersects the National Park perimeter and it hosts a dense network of paths meaningful to the slow tourism. Cerro al Volturno is one of the 13 municipalities within the Mainarde area. The small village dominates the surrounding landscape with the Pandone Castle. The wide municipal area includes 12 hamlets where, on the one hand, the typical features of the rural settlements seems to be almost totally preserved and, on the other hand, a severe depopulation process is going on. Among other vernacular architectures, the pagliare punctuate the surrounding landscape. "The straw route" is a strategic design proposal aimed at defining an itinerary reconnecting the pagliare spread throughout the landscape in Cerro al Volturno by reinventing the centre-countryside relationship, defining new gathering spaces and promoting new forms of rural urbanity.

Keywords

Inner areas, abandoned heritage, pagliare, trails, rural

Inner routes in Molise: a marginal region of Italy

This paper is the outcome of a "research by design" carried out by this research group at the Department of Architecture at the University of Naples "Federico II" focused on the fragile territories of Italian Inner Areas. The authors have variously developed the aforementioned issue in different contexts analysing, in particular, the inner areas of Campania, Basilicata and Molise regions. This paper focuses on the Molise region where it is detectable a wide heritage made of ancient roads that innervates the entire region in the face of a modern infrastructural system that only tangentially concerns the region. This makes Molise one of the Italian regions in which it is paid particular attention to the theme of paths and the enhancement of the landscape.

The Inner Areas account for 60% of the Italian territory and a quarter of the national population is living there. In Italy, in 2012, the National Strategy for Inner Areas (SNAI) was promoted by the Agency for Territorial Cohesion as part of the 2014–2020 Partnership Agreement with the European Union. The SNAI represents an innovative national policy for the development and the territorial cohesion which aims to contrast marginalization and depopulation: typical phenomena of Italian inner areas.

The expression Inner Area refers to those fragile landscapes that lie distant from the "main centers" offering essential welfare services (education, health and mobility) although they are rich in important environmental and cultural resources and highly diversified as a result of natural processes of anthropization.

SNAI has selected seventy-two project areas equivalent to 16.7% of the national territory, on which to intervene by investing in promotion and protection of the territory and local communities' wealth, enhancing their natural and cultural resources, creating new employment circuits and opportunities. Among the seventy-two SNAI areas, extending along the entire Italian peninsula intersecting the territories of all twenty Italian regions, four project areas are located within the Molise region (Matese, Fortore, Alto-Medio Sannio, Mainarde) which is the Italian region with the highest ratio of SNAI-areas to the whole regional area (52%) (ISTAT, 2011) (Fig.01).

The marginality of the Molise region stands out even more clearly

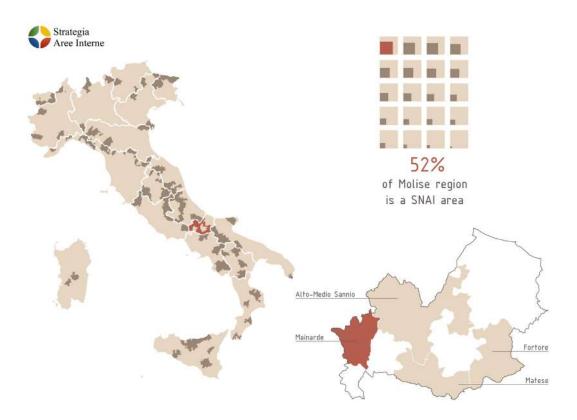


Fig.1 - The seventy-two SNAI areas in Italy and the four inner areas in Molise region - Source: Melina Di Tuoro 2021

from the analysis of the infrastructural systems that serve the territory: Molise and Basilicata are the only Italian regions that do not have their own airport; the only motorway runs along the Adriatic coast while the railway network connects the four "poles" identified by the SNAI: Termoli, Campobasso, Isernia and Venafro. The remaining part of the region can only be reached through state roads or secondary roads (Fig.02).

It is emblematic of how the main infrastructural system has developed following the hinterland-coast directionality: connecting the poles to the coastal system. However, historically, connections were guaranteed by another type of route that crossed the region from East to West following the main direction of the Italian boot. These historical paths, crossing the territory transversely and connecting numerous inner localities through a dense network of paths, are called *tratturi* the main ones – and *tratturelli* – the secondary ones. This network was crossed by shepherds and their herds during the periods of transhumance.

Even if most of these customs have been lost, in 2019 UNESCO included the ancient rite of transhumance in the list of Intangible Cultural Heritage. In the same direction, people are increasingly interested in slow tourism being motivated by a desire for rediscovering their roots and exploring the landscape in depth.

A similar initiative has been promoted by the national company of the State Railways. It has launched a campaign for the recovery and the enhancement of historical railway routes; the Italian Transiberiana is a historical train that crosses the Abruzzo region and arrives in Molise giving passengers the chance to take a journey through time, aboard vintage trains, along paths surrounded by nature and beautiful villages. This route known as the Parks Railway, connecting the city of Sulmona to the city of Isernia, crosses the wooden area of Upper Molise featured by mountains, valleys, trails and hamlets that are guardians of history, art and ancient traditions.

Mainarde Inner Area: links and features of an uncharted landscape

Among the four Molisian inner areas, the Mainarde Area is the One with the highest percentage of forest surface (65%). It is partly

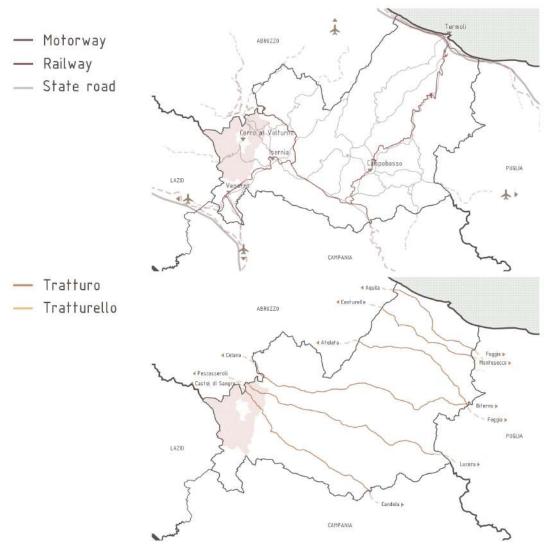


Fig.2 - Molisian systems: the network of infrastructures and tratturi - Source: Melina Di Tuoro 2021

occupied by the National Park of Abruzzo, Lazio and Molise (PNALM) and it hosts a dense network of paths enlivened by hikers who feed the slow tourism. The PNALM is a protected area of over fifty thousand hectares whose borders extend into the territory of the three adjacent regions. The Park Authority that manages it has the main task of raising awareness among local populations in order that the development of their living conditions is based on conservation, enhancement and rational management of natural and cultural resources held within the protected area. For this reason, the Park Authority protects and promotes traditional and quality activities linked to the material culture of the area. At the same time, the Molise region promotes slow tourism, for instance, through the creation of a system of itineraries that can be traveled by foot or by bike, known as "Paths of Molise". It is a network of low or medium difficulty trails lying in the Molisian inner areas and intercepting natural oases, historic villages and architectural works of great interest.

The Mainarde Area is made up of thirteen municipalities among which Castel San Vincenzo stands out as the "leading village" of the SNAI Area. Thanks to the presence of the Lake of Castel San Vincenzo, the abbey and the archaeological site, the aforementioned municipality is a pole of attraction which can represent a driving force for the relaunch of the entire Inner Area (Fig.03).

The Mainarde Area is characterized by the presence of many mountain chains including the Mainarde one, from which the Inner Area takes its name. Its municipalities, small hamlets often built on heights, preserve a historical, artistic and naturalistic heritage of considerable value: castles, watchtowers, museums, archaeological sites, hermitages, waterfalls, oases and parks constitute the nodes of a network of main places of interest that generates connections and marks travel and permanence times.

Although the previously described network is made of valuable cornerstones, it does not seem to be widespread enough to connect the entire territory of the Mainarde Area.

This other space – the one far from the "centers of attraction" – is mirroring the fragmentation of the area, a feature that characterizes the urbanization process of the Molisian territory.

From the study of historical maps it emerges that the Molise region

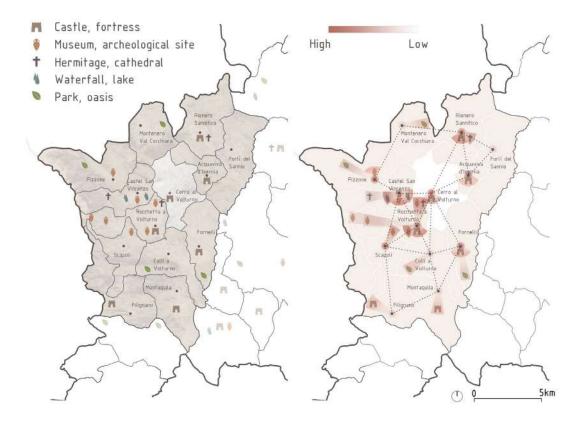


Fig.3 - Main places, connections and permanence times in the Mainarde Inner Area - Source: Melina Di Tuoro 2021

has always appeared as a territory dotted with small and disconnected centers whose unique link between them was the road (Fig.04). The road is an ever changing infrastructural device depending on the geographical variable. It weaves a narrative structure holding together plot and subplots of a single story made up of major and minor heritages constituting the uncharted landscape.

"Looking at this other space which has been invisible for a long time can represent an opportunity to reverse the gaze, a possibility to rearticulate and redesign the existing [...] an opportunity to re-centralize the margin."

Cerro al Volturno: the fragmentation as a value for preserving the widespread rural heritage of pagliare

Cerro al Volturno is a small village within the Mainarde Area and it is recognisable for the Pandone Castle, its landmark overlooking the valley. The surrounding landscape is characterized by the presence of oaks (*Quercus Cerris*) and the Volturno river: naturalistic elements from which the municipality takes its name.

In relation to the Mainarde Area, Cerro al Volturno is located in a strategic position: it is a crossroads of streets of varying capacity that connect it with the neighboring municipalities. Major mobility flows are guaranteed by the SS652 state road. Although it is one of the most important roads linking the Adriatic coast and the Tyrrhenian coast, the SS652 road – going through Cerro al Volturno – splits in two parts the municipality.

The wide territory of Cerro al Volturno includes twelve hamlets. Unlike the historical center which has seen its urban fabric and its infrastructural connections evolve over the years, the hamlets have preserved the typical features of rural settlements and are experiencing a severe depopulation caused by factors of urban attraction and rural expulsion. This preservation, enabled by the rooted territorial fragmentation caused by the furrow of the Volturno river, has assured

Antonio De Rossi, "Introduzione. L'inversione dello sguardo. Per una nuova rappresentazione del paese Italia," in *Riabitare l'Italia: Le aree interne tra abbandoni e riconquiste*, ed. Antonio De Rossi (Roma: Donzelli, 2018), 4-5.

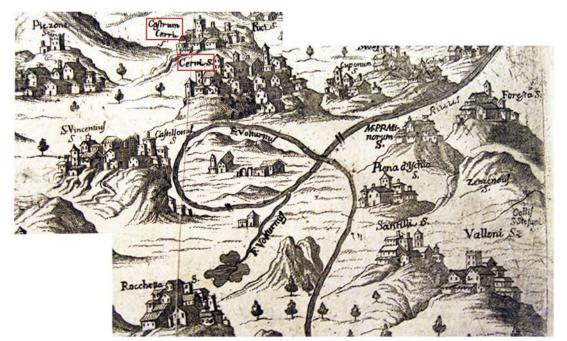


Fig.4 -Ad Historiam Abbatiae Cassinensis Accessiones - Author: M. Guglielmelli, 1734

the continuity of a rural heritage witnessing the history of the communities inhabiting those places. As depicted in the historical maps of Cerro al Volturno, the "consolidated historic center" – the main social and cultural hub – is well distinguished from the twelve hamlets defined as "rural villages" (Fig.05).

In these contexts, it is possible to identify different types of vernacular architectures created with multiple structural solutions and often located close to paths used by shepherds who sought shelter to rest with their flocks. Specifically, the rural villages of Cerro al Volturno are characterized by the presence of *pagliare*: a typical rural architecture that is strongly rooted in the morphology of the ground and then that contributes to structure the surrounding landscape. Most of the *pagliare* are built on two levels having differentiated entrances to the top floor and to the lower floor, the latter reserved for livestock. The ground level was generally used as a temporary shelter for animals and as a place for processing products and foodstuffs. Instead, the second level was intended to accommodate the farmer and his family and not seldom it was also used as a forage storage acting as thermal insulation for the animals at the level below. The internal connection was made by a ladder placed against the wooden slab (Fig.06).

The choice of the building site for these rural architectures is particularly interesting: they were usually located on the slope of the agricultural land having the best exposure to the sun and the best protection from prevailing winds. The ground where *pagliare* are usually standing has a difference in height of about three metres. These rural architectures are featured by a dry stone construction – employed for the retaining walls and for those shaping the edge on the road front – and by a wooden structure bearing a pitched roof covered with straw bundles.

In recent years, the original covering has been replaced almost always by metal sheets because of heavy snowfall damaging them.

The stone walls of the basement, extending beyond the perimeter of the *pagliara*, often delimit an enclosed outdoor area for livestock (*mandra*). In some cases, these structures continue even defining entire sections of the road and then creating a continuity between the architecture and the infrastructure. "Roads have not always been roads; originally they were ways for a slow appropriation of a territory; ancient

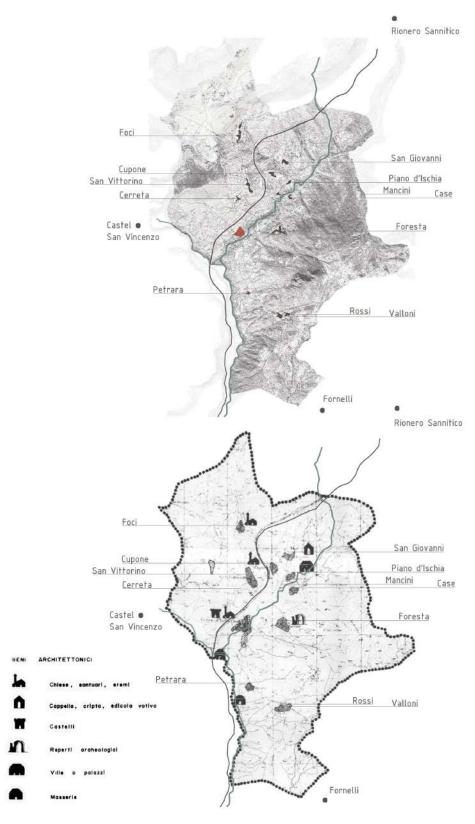


Fig.5 - The twelve hamlets - rural nuclei - in the territory of Cerro al Volturno - Source: Melina Di Tuoro 2021

inhabitants have patiently traced the networks of possession generating places in which to remain and from which to develop new plots."²

Itineraries and projects for the hamlets of Cerro al Volturno: Cerreta and Valloni-Rossi as case study

The case study of Cerro al Volturno emblematically exemplifies how the streets can be interpreted as traces capable of telling about themselves and giving back the memory of the city.

Central-southern Italy is marked by traces that have survived many territorial transformations: these traces related to past movements are as deep as ancient. The *tratturi* (from the Latin *trahĕre* meaning to drag, to pull) are ancient paths, they are highways of the past generated by the rhythm of the step of both men and animals who used to undertake veritable migrations. Their design was determined by a sequence of seasonal movements along precise and repeated routes alternating with moments of pause in which they stopped close to water sources and shelters.

The pace of the road marks the time for reading the territory and feeling in profound connection with the landscape. The slowness of the movements enables both the study of the geography and the internalization of reference points. These are fundamental actions in the development of both the innate sense of direction and the awareness of one to be in relation with time, space, and itself.

Over the years, the demand for faster and more efficient mobility infrastructures has led to the search for new routes and roads. The car has become the means of transport par excellence with the consequent creation of new highways affecting the surrounding landscape. While it is true that highways reduce distances by greatly optimizing travel times, it is also true that this type of mobility infrastructure cuts out a large portion of territory and population. In addition, the growing impoverishment of the landscape knowledge of the younger generations is fuelled by their predilection to increasingly fleeting crossings, lacking in direct contacts with the territory.

² Enrico Alfonso Corti, "La città e le sue tracce. Memoria, identità, progetto," in *La traccia e la memoria*, ed. Luigi Stendardo (Napoli: Istituto italiano per gli studi filosofici, 2009), 58.





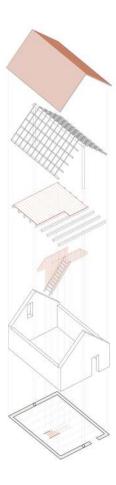


Fig.6 - The pagliara: a typical rural architecture of Cerro al Volturno - Source: Melina Di Tuoro 2021

Demonstrating the centrality and urgency of the above, one of the main proposals within the strategy of the Mainarde Inner Area aims at improving the livability of the area and increasing its attractiveness by working towards the creation of a cycle route: known as the "Mainarde Bike". The strategy promotes inner connections between the municipalities of the area through the use of pedal assisted bicycles. Furthermore, an active inclusion policy is promoted in order to give back a more alive, united, supportive and participatory area, for instance, by introducing services capable of connecting the territory internally and towards larger centers. The "Mainarde Bike" links all the thirteen municipalities within the Inner Area through four different rings entirely consisting of reactivated existing path networks (Fig.07).

The infrastructural system that gave shape to the landscape, the tangible and intangible heritage – particularly the widespread and rural one – and the current political strategies referable to the SNAI are the three elements taken into consideration through a multiscalar approach necessary in order to recognize the potential of the Mainarde Inner Area. This is the basis of the methodological process structured to propose – for the case study of Cerro al Volturno – a project here intended as a research tool and for the enhancement of inner areas.

The methodology was structured in a never really linear sequence of phases: first of all, investigations about the main territorial features were carried out before mapping and cataloging widespread elements. Then, a verification phase was carried out focusing on the relationship between widespread rural architectures and historical routes: this led to the definition of the design strategy.

In the first phase, the starting point was the direct observation of the municipalities within the Mainarde Inner Area: during a series of exploring surveys of the area, it was possible to collect photographs, videos and interviews with local people as well as materials and data provided by the Municipal Administration. This learning process has revealed the potential and critical issues in the area. Furthermore, field studies have highlighted the fragmented nature of the territory, not just socially but also geographically and infrastructurally speaking. The territory has been analyzed in its anthropic and natural characteristics in order to understand its quality and consistency, although an updated study of urban transformations has been complicated because

of the lack of cartographic sources.

Molise, in fact, turns out to be a region very little digitized and at the same time almost unknown to Italians themselves, to the point of being popularly recognized as "the region that does not exist". This condition made the iconographic study even more useful. Within this research, iconographies represented a meaningful tool to learn about the landscape of Molise and the peasant civilization. In particular, within the work of the xylographer Romeo Musa, the *pagliare* are detectable standing as a permanent presence subordinated to the multiple contexts depicted.

In consideration of what emerged from direct observation and listening to local actors and due to the cartographic lack, it was needed to define a new map of the widespread elements of the territory. On the digital transposition of old cadastral sheets has been overlaid a network of punctual elements such as water springs, wash houses and *pagliare* previously mapped during the surveys. The research related to these punctual elements of the territory was followed by the study of the linear elements of connection between the municipalities of the Mainarde Inner Area.

Studying the length of the trails that connect Cerro al Volturno to the municipalities of Castel San Vincenzo, Rionero Sannitico and Fornelli according to the type of journey (vehicular, bicycle, pedestrian), it arises clearly that by preferring the paths system the distances are shortened in terms of mileage as compared to the driveways. The analysis of these data has led to the definition of three strategic axes that connect Cerro al Volturno to the three adjacent municipalities through a trails network (Fig.07). This not only reduces the distances but also, by crossing the different hamlets, it makes possible to enhance these paths that connect nature, community and punctual elements sprawled in these territories generally excluded from the main mass itineraries.

By understanding geographical features and properties of these three axes and, at the same time, by overlapping the network of punctual elements on the shape of the landscape – made up of both natural and infrastructural systems – two design sites of interest have been pointed out in Cerreta and Valloni– Rossi.

These two hamlets, located on opposite sides of the centre village – Cerreta to the north and Valloni–Rossi to the south – are distinguished

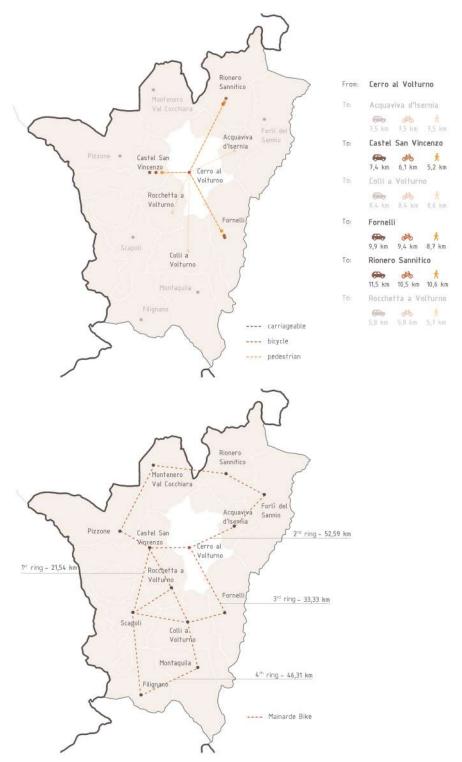


Fig.7 - Strategies and research for inner connections: Mainarde Bike and project axes - Source: Melina Di Tuoro 2021

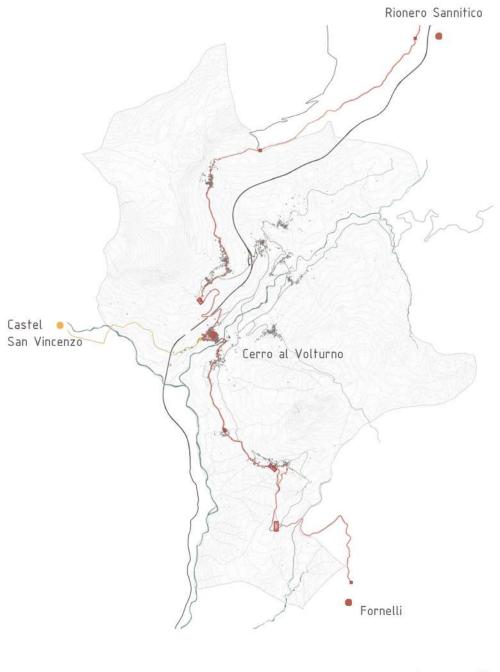




Fig.8 - The straw route: an itinerary to reconnect the pagliare spread throughout the landscape - Source: Melina Di Tuoro 2021

by their vocations but both consist in the extreme points of the proposed strategic path. As a result, this proposal traverses lengthways the entire municipal area, connecting even those hamlets that were most affected by the isolation caused by the construction of the SS652 state road (Fig.08).

Cerreta is a hamlet that intercepts the paths leading to the "Pantano della Zittola" protected area and is located in a predominantly wooded area featured by the presence in the immediate proximity of a natural water source. The rural settlement of pagliare in Cerreta is quite close to the village and overlooks the valley below, opening up to the magnificent view of the Pandone castle. Furthermore, the proximity to the exit of the SS652 state road makes the hamlet of Cerreta a potential crossroads for tourist flows. Thus, the area has been redesigned starting with the restoration of existing rural architectures reconfigured as tourist accommodations and put back into the system through the creation of an architecture provided with services and dining areas (Fig.09). By evoking the characteristic architecture-infrastructure relationship observed in the pre-existing *pagliare*, the design proposal in Cerreta is located below the level of the road, extending the street's morphology and expanding its vocation: from a place of transit it also becomes a place of rest.

Moving forward, between Cerreta and Valloni-Rossi, the route intercepts other hamlets interspersed with *pagliare* and stone wash houses located at the edge of the road. The natural landscape undergoes a change: the presence of oaks gives way to olive plantations and the road, often being the limit of agricultural land, integrates itself with the terracing systems made with dry stone masonry. As a matter of fact, the production of olive oil is central to the economy of Cerro al Volturno; the southern side of the municipal area, deeply linked to agricultural productivity, is home to the agricultural company "Oro Minerva" which, in addition to promoting the raw material, protecting the environment and enhancing the territory, is also involved in social agriculture policies.

Valloni-Rossi belongs to this system. Within the hamlet an unfinished public space can be found: an elliptical-shaped square rises on the position of a valley that is tangent to the road. Starting from the palimpsest described, the project connects different heights structur-



Fig.9 - A new tourist area: services and dining area among the pagliare in Cerreta - Source: Melina Di Tuoro 2021

ing the public space on two main levels through the proposal of a new market area which includes shops useful for the production and processing of local products (Fig.10). The road becomes a device for reconfiguring the landscape as proposed a little further south where, starting from the road project, a public space is structured on several levels which, following the hill, reconnect the widespread inherited rural heritage.

Therefore, "the straw route" is a strategic design proposal aimed at defining an itinerary reconnecting the *pagliare* spread throughout the landscape in Cerro al Volturno by reinventing the centre-countryside relationship, by defining new gathering spaces and by promoting new forms of rural urbanity. The road changes its intrinsic value: it's not only a device that connects places but a place in itself.³ By crossing spaces and memories, "the straw route" leads to the discovery of "rural areas rich in traditions and agri-food, artisanal and tourist resources, deposits of history and civic virtues stratified over time and not yet completely extinguished."⁴

The straw route: a replicable strategy for the development of rural areas

This proposal, which emerged from the previously explained research by design process, holds and puts into practice what is indicated in the Rural Development Program (PSR 2014–2020) of the Molise region. The themes taken into account range from the generational change in molisian agriculture to the creation of new businesses in the molisian rural areas; from the enhancement of the usability of rural territories to the restoration of small–scale architectural elements and the recovery of *tratturi*.

The boost of rural areas through the promotion of tourism development and the strengthening of other territorial resources such as agriculture or the material culture of places is also at the heart of the

Francesco Careri, Walkscapes. Camminare come pratica estetica (Bologna: Enaudi, 2006).

⁴ Rossano Pazzagli, "Un Paese scivolato a valle. Il patrimonio territoriale delle aree interne italiane tra deriva e rinascita," in Aree interne. Per una rinascita dei territori rurali e montani, ed. Rossano Pazzagli, Marco Marchetti, Stefano Panunzi (Catanzaro: Rubettino, 2017), 21.

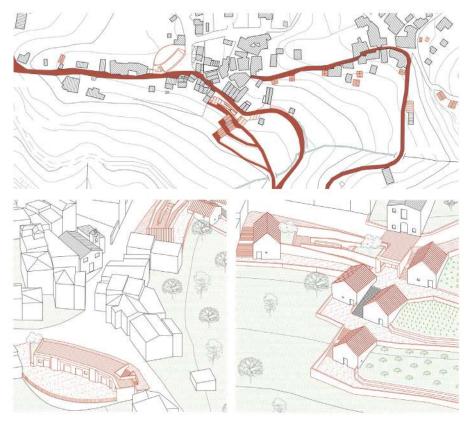


Fig.10 - A new market area: production and processing spaces between the terracing systems in Valloni-Rossi - Source: Melina Di Tuoro 2021

National Strategic Tourism Plan PST 2017–2022 and of other international strategies such as the ONU 2030 Agenda for Sustainable Development which within the Goal 08, Target 8.9 states "by 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products."⁵

The project proposal "the straw route" contrasts the marginalization of inner areas and the consequent loss of the social dignity of the countryside with a potentially replicable strategy of valorisation of heritages and landscapes that starts from the roots.

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The Chinese "Streetscape" as a social and linguistic space

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Abstract

In Europe the street is traditionally the place of self-representation: the "Strada Nuova" in Genova has been designed in 1550 to allow noble families to build their own palaces in a competition of beauty, richness and power. In the American tradition the street became overall a place dominated by its market role (Venturi on Las Vegas, 1972). In China streets are the real public space for people's daily life and its essential activities (trading, eating, playing, discussing): their role in urban life is so strong that sometime a street can appear even where the planning didn't establish that.

The western main urban public/social space is the square, but for the eastern countries – especially China– the streets represent the most representative urban public space that can be used together without the class differences.

However, from the ancient cities to today's high-density cities, the Chinese streets, because of their social role, have experienced also a very important connection with shop signs, posters, notices of all kinds, flags and signs, luminous writings. All these objects are a kind of ornament of daily-life as well as a real interesting documentary material, useful to understand permanencies and variations in the use of the cities during their transition from the former order to the new one.

The paper introduces the framework and the contents of a multidisciplinary research project at work, between urban morphology and Chinese language and culture. (max. 1500 characters, spaces included)

Keywords

Inner areas, abandoned heritage, pagliare, trails, rural

Introduction

As part of the activities of the Joint Research Unit "Transitional Morphologies" (established in 2018 between the Southeast University of Nanjing and the Polytechnic University of Torino, here involving also the Department of Foreign Languages and Literatures and Modern Cultures of the University of Torino), a multidisciplinary project on the streetscape is underway which considers the street at the same time as object / space of attention for urban morphology studies and as an object of analysis by linguistics, as a place of communication through the written word.

The main field of this research is the space of the street within the Chinese city. This short essay aims to outline the research program as an ongoing project, describing its presuppositions, aims and criticalities.

State of art

Between the end of the Seventies and the second decade of 21St century, the topic of the role of the street in "social urban form" became more and more relevant, giving to the studies on Chinese collective spaces some general elements useful to start and also to understand the cultural differences between Western and Far Asian civilizations (Anderson, 1978, Mehta, 2013, Whitehand et al., 2014)

The so called "street-life" in China (JIANG, 2008) has been initially investigated through a rich and anthological approach (Dutton, 1998), moving them towards arguments related to urban form (Hassenpflug, 2010) as well as towards the "pop" image of the city itself (De Kloet and Scheen, 2013).

However, literature has not yet explored the specific theme of the relationship between writing and the street in the Asian city and in particular in the Chinese city. For this reason, real field research is necessary. The Authors of this papers decided to keep together (in an inter-disciplinary investigation) their different competencies (Madaro, 1997, Trisciuoglio et al., 2017) and their different references' backgrounds (Janicot, 2015, Gabbiani, 2016, and CHEN and Thwaites, 2013, TIAN et al., 2014) in order to literally read the Chinese urban spaces.

So, this research moves along two main directions to describe the social role of the street in contemporary urban China (in the hypothesis of a continuity with the Chinese cultural tradition):

- a) a first direction (driven by the Department of Foreign Languages and Literatures and Modern Cultures at the University of Torino) studies the street as a medium, a place for communication and writing, as a cornerstone of the Chinese tradition;
- b) a second direction (driven by the Department of Architecture and Design at Polytechnic University of Torino) studies the anthropological foundations of the Chinese urban form and in particular the street as an urban space.

The following pages provide initial partial reasoning about this work perspective with respect to a research project, started between 2018 and 2019 and still in progress¹.

The street as a medium. Linguistic finds

Within the program of the Joint Research Unit "Transitional Morphologies", one specific project (lead by Federico Madaro, Department of Foreign Languages and Literatures and Modern Cultures of the University of Torino) is the study of the permeating presence of writings, both public and private, in the Chinese street.

The project started in 2019 and was initially planned in three steps:

- Step 1. Choice of a specific urban area, possibly with homogenous urbanistic features and within an easily accessible urban context.
- Step 2. Collection of the photographic material through an extensive on-site exploration of the chosen area.
- Step 3. Categorization of the collected material based on the following criteria:
- a) Support of the writings (wall, panel, metal plane, fabric banner, paper or cardboard etc.);
 - b) Location of the writing (wall, balcony, billboard, road sign etc.);
 - c) Nature of the location (public, private or mixed);

Even if this paper is the fruit of a continuous discussion between the Authors, Federico Madaro can be considered as responsible for the paragraphs State of the Art and The road as a medium. Linguistic finds, while Marco Trisciuoglio can be considered as responsible for the paragraphs The street as a space. Morphological traditions and Conclusions. All the pictures shown in this paper are from the Archive of the "Transitional Morphologies" Joint Research Unit (TransMo Archive), whose Marco Trisciuoglio is Co- Director with BAO Li. The Authors thank ZHANG Yang (ZHANG, 2018) for her support in the re-drawing of figures 09 and 11.

- d) Typology of the writing (handwriting, printed writing, calligraphy etc.);
- e) Graphic features (color of the characters, color of the background, combination with images etc.);
- f) Purpose of the writing (education, communication, advertising, political or social instruction etc.).

The study case is the city of Nanjing (Jiangsu Province), where the Joint Research Unit "Transitional Morphologies" is based. The photographic material was supposed to be collected during a field trip to Nanjing, funded by the University of Torino in February 2020, but unfortunately the trip was cancelled after the insurgence of Covid–19 in China. The project will be retrieved as soon as the Chinese Government will ease the restrictions on travels to China.

What will be presented here is a small selection of photographs from the Archive of the Joint Research Unit, in order to exemplify the different types of writings will be analyzed during the project and also their morphological features (Fig. 01).

Nowadays, in the process of high-speed urbanization, street space as streetscape in China is facing a lot problems such as the poor quality of materials and facilities, the overflow of motor vehicles, a general lack of security. The poor construction standards, the mechanical urbanism, the rapid growth of cars and population, make Chinese street no longer a comfortable place to be lived as a community place.

However, the tradition of the street perceived as the main social place is still alive, above all considering the alleys, the pedestrian streets and the secondary paths along the big avenue (Fig. 02).

In the Chinese dictionary, the "street" is described "the road that has buildings on the both sides". Many words uses the character "jie" (

■), that means street, such as "jie fang" (■

■, that means neighborhood), "jie shi" (■■, that means street market), and "jie tou xiang wei" (■■■, that means alleys). Of course, as an urban object, the street is a physical space, but words as "jie fang" and "jie shi" bring more social meanings. "Jie fang" is used to refer to the streets in community, which turns to the adjective of the neighbor living nearby, because of the important social meaning that the street itself plays in China for people's daily life.

Since a community is a group of persons sharing something

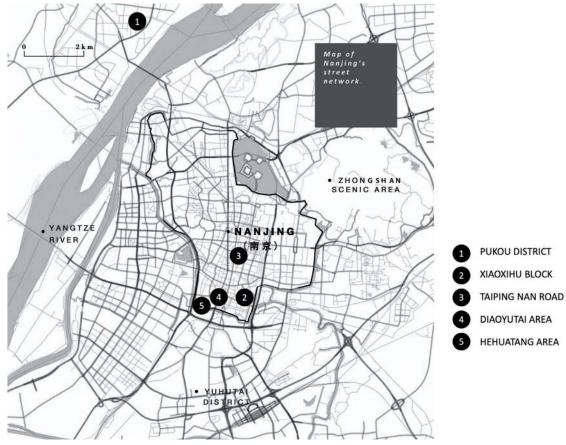


Fig.1 - Map of Nanjing with the placement of the main areas considered for the research - Source: Trisciuoglio 2022, TransMo Archive

(resources, uses, feelings, places and so on), the language is, obviously, the main part of the community life. In an imagery like the Chinese one, where character and words traditionally play also an ornamental role, the written language in the street becomes a documentary material to study what it is possible to describe as the Chinese "Streetscape".

Many are the uses of written characters in the streetscape. Often, buildings walls and construction site walls are kept as instruments for instructions from local and central authorities (Fig. 03). In other case, mobile red banners are on buildings, bearing temporary slogans (Fig. 04). Sometime, blue permanent panels are hanged in specific places as conveyors of referential messages (Fig. 05). Frequently, even hand written words or sentences (for example pair of vertical lines written on the sides of a door as couplets) refer to a specific occasion or political messages (Fig. 06). Moral instructions can be given by vertical panels on public buildings, paying as conveyors (Fig. 07).

The colors, the graphic style, the material support, the being machine-made or hand- made, also the position in the street, all they are some of the features of the street written, that must be kept in consideration, classified and studied. At a deeper level, also the language features (as the meaning and the rhetoric use of the words) must become the core of the research.

For all these reasons, the ongoing research is working at the moment on widening the street-written collection. Here only some examples are exposed as follows.

The street as a space. Morphological traditions

The "linguistic space" represented by the Chinese "streetscape" is part of a bigger phenomenon, due to the transitional nature of urban form. The transformation of the street in the real place of daily life (where people cook, eat, play, debate, meet, cultivate vegetables, keep pet animals) comes from an important urban revolution which happened in China between the 14th and the 15th centuries and which effects are still vivid and important in the pedestrian streets of nowadays China. This is one of the main topics of the studies on the urban morphology of Nanjing and other Chinese cities, whose Marco Trisciuoglio is in charge.



Fig.2 - The "Left Street" in Pukou District - Source: Trisciuoglio 2017, TransMo Archive



Fig.3 - Urban regeneration works in XiaoXiHu block - Source: Trisciuoglio 2019, TransMo Archive



Fig.4 - Red banners on building to be demolished in Taiping Nan Road -Source: Trisciuoglio 2019, TransMo Archive



Fig.5 - Functional elements of urban space in XiaoXiHu block - Source: Trisciuoglio 2019, TransMo Archive

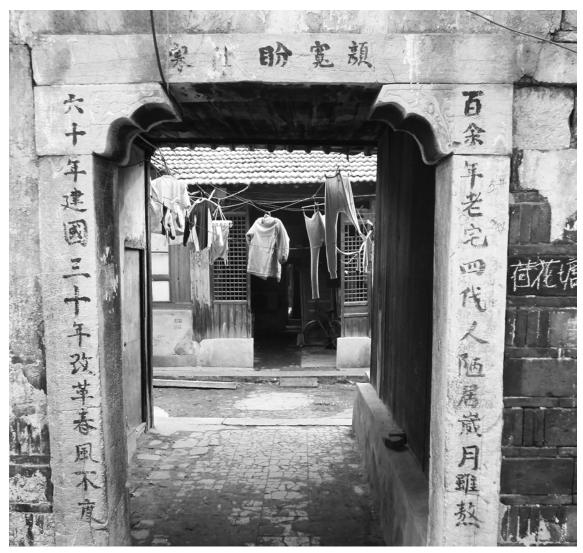


Fig.6 - View on a private courtyard from the street within XiaoXiHu block - Source: Trisciuoglio 2019, TransMo Archive



Fig.7 - Temporary market in Taiping Nan Road - Source: Trisciuoglio 2018, TransMo Archive

The Tang and Song urban revolution (known also as Chinese medieval city revolution) generally refers to the urban form changes in ancient China, from the Tang Dynasty to the Song Dynasty. During that period, the urban form turned from a closed one to an open

CS⁵ Lisbon, 12 – 14 October 2022 10 Full Paper Template one. Until Tang Dynasty, the "fang" (■) as a residential area and the "shi" (■) as a

commercial area were separated in the pattern of the city. The "shi" (realm of collective urban life) was set up in a concentrated manner, while the "fang" (realm of individual sides of urban liife) was closed by a walled square precinct and shut down at night to impose a curfew. With the slack of the management of the wall, the walls began to be destroyed, and shops appeared inside the square.

In the last stage of Tang Dynasty, the "fang" walls were no longer mandatory to establish and repair and they finally disappeared in the Song dynasty.

After removing the constraints of the wall, the city of the "fang" gathered together to become a city working in the framework of a street system as a social management system. From a political point of view, the centralization of the state power in Song Dynasty further was reflected in the development of the city's public life by weakening the living boundaries and by widening the public space. Because of the urban planning under the guidance of military defend, the city showed more and more dense urban fabric made by houses and extensive court-yards. There were no wide streets in the neighbourhood, the market was so crowded that the carriages could not pass.

In some way, before the Song Dynasty, the "wall" had been the real boundary between collective and individual sides of urban life: inside the wall there was the private ownership of the interior community, outside the wall there was a public space of ideological understanding.

The "Song revolution" transformed the urban space, that originally belonged to the public sphere, into a specific public-private joint management of the streetscape. People living on both sides of the street engage in various activities at their doorsteps and on the street. The general daily necessities between neighbours can also be borrowed. If a resident is bored, he just has to go out and chat with his neighbours: there is basically no privacy on the streetside. In order to let the sun



Fig.8 - Small family restaurant in He-HuaTang Area - Source: Trisciuoglio 2016, TransMo Archive

and fresh air enter the simple house, the door facing the street is always open, so that curious passers-by can also take a look at the physical scenery. People can walk to street stalls, teahouses, small shops and barbershops in just a few steps. These places not only provide daily necessities, but they are also social interaction centres, where people exchange information: hairdressing shops are social and a good place to spread the gossip.

The social nature of the street space determines why it can become a daily public space. In Asian culture, people prefer a relatively narrow street as a place for public communication compared to an open square. There is a commonality in the outdoor space, and the exterior walls of the houses on both sides of the street provide a relatively good privacy space. Therefore, it has become the fastest place for information circulation, and pedestrians have become the medium of information exchange process of strengthening the centralization of power prompted the ancient Chinese urbanization had an unprecedented momentum under the appearance of freedom.

In addition to public interaction activities, the most important and crucial part of the new urban culture, starting from the Song Dynasty, is the commercial activity on the street: ancient Chinese business flourishes and many shops fill the two sides of the streets, as it happens still nowadays (Fig. 10).

Different from the vertical development of European cities, the traditional Chinese houses usually have only one or two floors. The inner courtyard and the outer street separated by a wall make the daily life of the residents closely related to the commercial activities.

Another very important point of the so called "Shijing" culture is the community public activities. In Chinese, "street" is often associated with other characters to form other words, such as "jie fang", "s" and so on. This is linked to the neighborhood and clan communities that are centered on the street. "She", \(\mathbb{Z}\), or the community" as a social

group has two basic meanings: in ancient times, community was the place where the gods of the land were sacrificed, later and today, the community is an organized structure. The meaning of the two concepts together developed into the "social" and the "community". The interpretation of community as a clan is because the traditional way of living in China is mostly family gathering): festivals such as sacrifices,

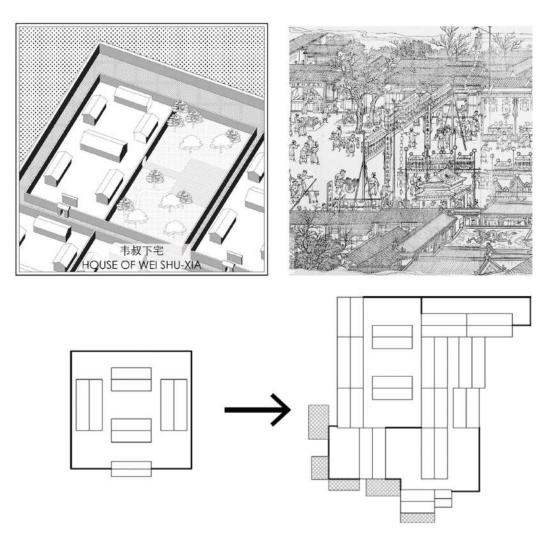


Fig.9 - The effects of the "urban revolution" with the opening of the wall precinct and the birth of the street-life - Source: Trisciuoglio 2018, TransMo Archive, re-elaborated by ZHANG Yang



Fig.10 - Shops and cycle/pedestrian city in DiaoYuTai Area, Nanjing -Source: Trisciuoglio 2016, TransMo Archive

Chinese New Year, weddings, funerals, and the birth of children are all presented through the streets. For example, running water seats, dancing dragons and lions, welcoming relatives, and going out.

The best representation of the vivid idea of the Chinese street-life as a streetscape, still very useful also to understand the role of the streets in nowadays urban China is the roll entitled "Along the River During the Qingming Festival".

It is a painting by the Song Dynasty artist Zhang Zeduan (1085–1145). It captures the daily life of people and the landscape of the capital, Bianjing, today's Kaifeng, from the Northern Song period. This painting shows the great changes the urban structure and landscape had with the connection between the private and the public side of cities during the Song Dynasty.

The buildings were directly facing the street, whether it was houses, shops or even the religious facilities, which made the city truly had the open landscape. In this painting, there were no defending facilities in the city watchtower or fence on the street (at least on the first version of this painting).

This painting shows the urban structure and landscape that changed greatly after the collapse of the previous closed urban system. Whether it's a home, a shop or even a religious facility, the building faces the street directly, giving you an open city view. In this painting, the shops along the street interface can be clearly seen or inferred a total of 33 buildings, including 5 hotels, 19 restaurants, which is more than 50% of the total sum of the shops, and all belong to the repast industry. There are 6 retail shops, 2 service shops such as pawn shop, and medical shops, and one woodwork workshop for making wheel. From the painting we can see that for different shops the openness to the street and public accessibility are different. Compared with Western architecture, ancient Chinese architecture uses wood as the main building material and uses columns and beams as the main component. The joints are connected by mortise and tenon, which forms a flexible structure. On one hand, such wooden material makes building a free and open form, on the other hand, the limited interior space makes people have to move their living space, social and business activities outside their house to the street.

Transformation in the mode of living, the increase in population, the



Fig.11 - Shops along the street in the painted scroll "Along the River during Qingming Festival (graph-ic re-elaboration with the identification of shops) - Source: Trisciuoglio 2018, TransMo Archive, re- elaboration by ZHAN Yang from LIU, 2014

prosperity of the handicraft industry, all of these changes brought the economic development. The living environment transformed from the courtyard to miscellaneous. From the picture, we can

street and the accessibility of the citizens is different.

There is a direction-oriented street-oriented shop. In the Ming and Qing Dynasties, counter-style shops have more forms, parallel to the streets, perpendicular to the streets, corner counters and the streets form a rich inner and outer space and a varied commercial space.

The Qingyuan version of "Along the River During Qingming Festival" was drawn in the Qing Dynasty, the image is clearer and the architectural structure is more similar to the traditional dwellings of modern and contemporary China.

The ancient Chinese traditional space types can be divided into four spatial fields: management space, street space, market space and religious space, and residential space. The management space corresponds to the ruling body, that is, the space used by government activities. The street space is open to ordinary residents and has strong publicity. The commercial and street space includes shops and temporary stalls facing the streets and markets (being pen and shared with ordinary residents, it has strong publicity).

Large-scale homes or gardens usually occupy a large area and are privately owned. Its street-facing interface can be divided into the form of commercial street and non- commercial street. On the interface of the non-commercial street, usually in addition to the entrance, it is basically a continuous wall, the interface form is simple. However, the interface on the commercial street will have shops along the street. These street shops are concentrated or scattered, usually owned and operated by the house or garden owner, and there are also cases where the merchants spontaneously build.

In the mixed area of residential and commercial streets, the shape of the shops along the street is basically to open some of the street, facing surfaces as shops based on the context of the original residential texture. There are many forms in which the house is open to the street. Some of them, open the courtyard door or wall, and the others are open the gable side of the building, the back of the inverted room to the street. Among them, residents spontaneously renovate their houses to carry out commercial activities, and also have adapted to commercial

streets or the occupation and addition of space along the street.

In traditional Chinese urban morphology, the market space inside the neighbourhood is planned and residents are not allowed to carry out unofficial licensed commercial activities in the square. However, in this painting, after the Song Dynasty, the market space inside the neighbourhood was relatively free. Although there are still restrictions on the wall and the gate, there is no regular shape in the market space, which seems to be formed naturally. The city will be scattered or concentrated in the distribution of houses, as the store faces the market space. Due to the limited size of the space, such houses are usually temporary sheds, mainly in the form of free markets for commercial activities.

Street corners are nodes that meet at the intersection of two or more streets and usually have strong commercial value. As can be seen from the figure, many street corners are composed of semi-permanent temporary structures such as the color gates, trees, pergola, parasols and booths.

Finally, the texture of ancient Chinese traditional cities is not homogeneous, and the scale of the buildings dominated by this land owner complicate the urban texture. Therefore, the isomorphism of the unit type and the non-homogeneity of the overall texture are typical features of the internal texture of ancient Chinese urban neighbourhoods.

Conclusions

Through the above analysis, it is clear that, although most of the ancient Chinese cities were built once and for all through unified planning, in the process of use, with the gradual relaxation of regulations, the growth of the city began to deviate from the original ideal state. And the integration with the market culture creates a space that is more adapted to the living of the residents. Some cities are also self-generated, and after they have developed to a certain scale, they have built a city wall and become a city.

Due to the spontaneous aggression of residents, the formation and shape of many streets are passive, without considering the characteristics of street activities that they can accommodate. This is different from the ritual public space in the West. But this tortuous, diverse and

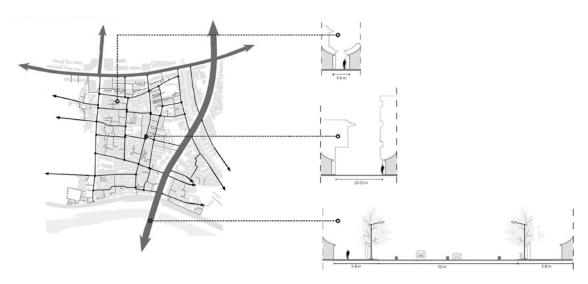


Fig.12 - The nowadays complex system of streets' network in HeHuaTang Area: from the traditional alleys to the main traffic road - Source: Trisciuoglio 2018, TransMo Archive

complex urban public space offers more possibilities for the public activities it can accommodate.

A street, on the one hand, maintains sufficient continuity, while on the other hand, the width changes, and after the mutation, the street continues to extend over the new width. This street node is a one-sided variable width node.

Although the spatial connection between the street and the street culture does not have a one-to-one correspondence, the occurrence of different street cultures is affected by the spatial form of the street nodes. Usually, street performances and some commercial activities will be chosen in places with good visibility, and the daily chills of residents will be carried out in a relatively invisible and relatively private space.

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Mapping temporary appropriations in the streets of Guayaquil's informal neighbourhoods

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Abstract

Streets are primary places of collective life in informally developed urban areas of Latin American cities. They are considered fundamental elements of cultural expression and socio-economic development. At the same time, they reflect socio-spatial trajectories and interdependencies between informal and formal processes, actors, and practices. While there has been increasing attention to the design and provision of public spaces to improve the living conditions of these environments, the understanding of the interaction between streetscapes and inhabitants' everyday practices needs further exploration. Fine-grain readings of the complex, self-organised, temporary practices on streets are essential for delineating future urban design operations.

This paper aims to explore how temporary appropriations define every-day experience in the streets of informal neighbourhoods. The study focuses on the neighbourhood El Cisne Dos in Guayaquil, Ecuador, and it relies on field research, mapping, spatial ethnography, and photographic documentation. The findings illustrate the role of streets as places of diversity, cultural representation and socio-economic development. They show that through inhabitants' everyday practices, streets constitute important social spaces that can empower the neighbourhood and not only elements enabling movement. Furthermore, we argue that understanding these streets' temporary appropriation contributes to building up contextualised design approaches.

Keywords

Temporary urbanism, streetscapes, appropriation, informal, everyday spaces.

Introduction

The rapid urbanisation rates of Latin American cities have brought about critical challenges for addressing the role of public space in sustainable urban transformations. More specifically, the public space of informally developed urban areas emerges as an essential element in articulating forms of spatial production, livelihood and socio-cultural practices. However, governmental interventions in public space materialise institutional agendas and models, or rigid urban design schemes that ignore preexistent informal dynamics. Thus, those projects juxtapose the temporary nature of appropriations, particularly in public spaces and streets with predominantly informal dynamics. From urban design practice and theory, an increased number of contributions present temporary transformations as a framework of analysis and intervention.2 However, for Latin American informally developed neighbourhoods, change and temporality have been for a long time integral to their socio-spatial trajectories and part of complex everyday street life.

In the absence of formal design and planning, self-produced streets have been primary places of collective life for many Latin American informal neighbourhoods. Their social production and construction are linked to trajectories of change and appropriation logics that respond to inhabitants' needs and desires.³ Studies have addressed the transformation of self-built areas from diverse perspectives but with limited attention to the everyday dynamics of public spaces and streets.⁴ In this sense, the temporary appropriation of informal streetscapes has been widely overlooked in the Latin American context. Understanding how streets are transformed by inhabitants' practices and the socio-spatial and temporal characteristics linked to their everyday appropriation is, according to us, essential for building up contextualised design approaches that could contribute to reframing urban space production and transformations.

This paper aims to explore how temporary appropriations define

¹ Duhau and Giglia, 2008.

² Bishop and Williams 2012; Mehrotra and Vera, 2017; Lydon and Garcia, 2015.

³ Hernandez García, 2013.

⁴ Lombard, 2014.

everyday experience in the streets of informal neighbourhoods. It relies on empirical data from the neighbourhood *El Cisne Dos* in Guayaquil, Ecuador. The article starts by positioning the study within the broad literature on temporal appropriation and everyday urbanism. Then, after a brief overview of the development of public spaces in the studied neighbourhood, we focus on two micro settings that illustrate the dynamics of transaction and recreation across the area. Through this exploration, we reveal the temporal and spatial dimensions of these spaces. Finally, this description is followed by a discussion on the study's implications for alternative approaches engaging with the temporary appropriation of streets.

Temporary everyday appropriation of streets

The complexity of ordinary street life includes many improvised uses and forms of appropriation emerging from inhabitants' everyday actions. Although they are integral to public spaces and dwelling practices, design scholars and governmental intervention schemes often ignore their logic. Over the last decades, a significant body of literature has aligned with influential theoretical contributions highlighting the lived experience and unplanned dynamics of cities' street life.5 This strand of literature is critical to conventional urban design and planning approaches and encourages the consideration of informal practices and bottom-up activities. Moreover, amidst conditions of austerity and uncertainty, there has been a growing interest in temporary, tactical interventions to appropriate streets, public spaces and vacant plots.⁶ Informal practices and short-term interventions are presented as tools to enact citizens' rights and legitimate alternatives to largescale approaches. However, the appropriation of these discourses by policymakers and planners' agendas and their actual potential to promote social transformation have been interrogated. Moreover, some studies have highlighted a lack of critical views on applying concepts in contexts where the links between informal practices and temporariness respond to different logics.7

⁵ See Jacobs, 1961; De Certeau, 1984.

⁶ Crawford, 2008; Lydon and Garcia, 2015; Tonkiss, 2013...

⁷ Devlin, 2018; Andres, et al., 2021.

A significant number of studies have explained how, in the context of inadequate institutional planning, lack of infrastructure, and designed public space, informal practices have been a general mechanism of place construction.⁸ In informal neighbourhoods, unplanned streets, street corners and other often overlooked spaces are developed and practised by inhabitants, becoming part of their collective everyday life. Mehrothra (2008) conceptualises informal space as the expression of cultures and identities strictly related to temporariness and citizens' needs and uses.⁹ Temporary public space transformations are more linked to everyday appropriations rather than to planned tactical interventions. As inhabitants appropriate space, processes of identification and temporary transformative actions modify the functional character and meanings of spaces.

A growing body of literature has focused on the relationship between inhabitants' informal practices and public spaces. Echoing Lefebvre (1991), this literature touches upon appropriation concerning use-value and space/time in everyday life. In this vein, by elaborating on informal practices as insurgent everyday forms of resistance, they stress inhabitants' agency to create their own space. For Hou (2020), everyday practices can represent an "everyday form of contention and contestation regarding how urban spaces are used, how activities are organised and negotiated, and how meanings are constructed". Looking at overlaps between informal practices and temporary appropriation is not limited to organised collective actions motivated by a specific agenda; it would instead include the daily practices emerging from the everyday needs of inhabitants.

Contextualising Public Space in Guayaquil's informal areas

In Guayaquil, Ecuador, most of its 2.7 million inhabitants live in neighbourhoods originating from a process of self-construction of dwellings and urban space¹². Since the 1950s, this incremental process

⁸ Lombard, 2014; Simone, 2010.

⁹ Mehrotra, 2008.

¹⁰ Hou, 2010.

¹¹ Hou, 2020, p.121.

¹² Rojas and Villavicencio, 1988.

has configured neighbourhoods that have been in constant change. Physical transformations follow a mode of urbanisation in which the construction of dwellings precedes the provision of road infrastructure, urban facilities and designed public spaces. Historically, inhabitants were engaged in diverse individual and collective manoeuvres to improve their living conditions and environments. They play a significant role in the social construction of their spaces, defining particular forms of use and appropriation. In the consolidated neighbourhood of El Cisne Dos, individual land occupation and informal auto-construction started in the 1970s. 13 Initially, in a landscape dominated by wooden stilt houses, catwalks and incipient infilled paths were the alternative to roads and sidewalks. The conditions of public space started to improve gradually by filling marshland and consolidating roads. Over the years, dwellings density increased and consumed most open space while regular street grids expanded into the estuary banks of the Estero Salado.

In the last two decades, public space has been positioned as a driver of urban transformation discourses that have also reached El Cisne Dos. With most plots ownership legalised, local and national governments have developed large scale projects linked to city-scale urban regeneration and ecological restoration initiatives. As interventions have increased, the physical conditions of public spaces - including streetshave improved considerably. The shortcomings of projects in other areas have been underscored by authors interrogating issues such as the imposition of regulations, deficient participation of inhabitants, and changes opposing local socio-cultural practices of socialisation, recreation, and livelihood.¹⁴ These types of remarks reveal the challenge of intervening in the particular urbanity of these neighbourhoods. Whereas governmental initiatives increase the amount of designed public space, they tend to neglect the spatiotemporal flexibility still prevalent on streets. This study shows that collective appropriations are temporary and emerge recurrently on the streets. Hence, in the following section, we focus on two such spaces, which illustrate the

¹³ El Cisne Dos has followed a process of individual occupation of public land rather than of organized invasions.

¹⁴ Allán, 2010.

temporary transformation of streets into spaces of transaction and active recreation.

Temporary spaces for transaction

In *El Cisne Dos*, the gradual physical improvement of the neighbourhood included the construction of several urban facilities. Nowadays, as they provide the necessary services to inhabitants, their use generates an increased presence of people and cars around them. One example is the area next to the *Health Centre El Cisne Dos* at the intersection of *Calle 11* and *Calle Ch*. The Centre is one of the larger public health facilities in southern Guayaquil, so it receives a considerable range of the population every day. In 2015, it replaced a smaller pre-existing building, substantially increasing the number of people visiting the area. Its daily operations involve many workers and users whose needs for food and transportation have translated into opportunities for informal vendors and vehicles (e.g., *tricimotos*, informal taxis). Vendors offering diverse forms of local food seek to take advantage of the increased flux of people while overlapping with the commercial activities of a few restaurants and stores in front of the building.

Mobile selling carts and *tricimotos* start occupying the street in the morning hours. From 8 AM., with a few cars parked on the street, vendors start locating in front of the building. The street occupation goes hand in hand with the increasing movement of private vehicles seeking parking on both sides of the road. Also, the arrival and departure of *tricimotos* and informal taxis coincide with pedestrians walking towards and from the main entrance located on the southern sidewalk of *Calle* 11. From 11 AM. the presence of vendors and users intensifies. Some vendors occupy the sidewalk adjacent to the entrance without blocking the building's access ramp. However, the majority of them align across the road. An average of six vendors carts and four tricycles occupy the opposite side intersecting the main pedestrian flows moving around the corner. Vendors and their mobile selling stations share space with

for transportation.

¹⁵ The Health Centre El Cisne Dos is a centre type C: an establishment that serves a population from 25,000 to 50,000 inhabitants.

16 Tricimoto is the local term to describe motorized tricycles used

other mobile objects that occupy the roadside along this block.

The mixture of parked cars, traffic cones, plastic chairs and improvised wooden devices that reserve parking bays, restaurant signs, and trash bins characterise the alternative use of the space in-between the sidewalk and the road. At the same time, on the 2-meters sidewalk, several multiservice stores use a portion part of the circulation space to put plastic chairs, tables and commercial signage on facades and electric poles. The movement of people between 11 AM and 3 PM is not restricted to the immediate space adjacent to the building but also extends along the street up to nearby restaurants and transportation vehicles. For instance, across the corner, no more than 50 meters away from the entrance, a couple of Venezuelan immigrants sell lunch in a restaurant that opens around 10 AM. This business and the other four restaurants in front of the Health Center use the sidewalk and road as working space. Its spatial arrangement configured by plastic chairs and tables shares the road with unregulated taxis waiting to pick up more clients during these hours. After 3 PM. commercial activities start to decrease, and some vendors leave the area. However, new vendors still arrive.

The case of Cecilia, an unemployed, elderly woman, is illustrative of this dynamic. Living two blocks away from the Health Centre, she recently started to see the proximity to this facility as an opportunity to improve her living conditions. The absence of a secure income motivated her to begin selling roasted plantain at the southern corner of this street intersection. Although after 3 PM. the space in front of the health centre is not as crowded as in the morning, she locates in the opposite corner where there is more available space. The mixture of vendors living in nearby areas and the surroundings show a heterogeneity that corresponds to the diversity of users of this space. Vendors are not part of any organisation and do not have a fixed assigned place on this street. However, they can repeatedly be seen located at the same selling spots and recognise this street as an essential source of income. Even during the pandemic COVID-19, the presence of informal vendors remained. In 2020, vendors highlighted the importance of being able to work on this street since lockdowns and quarantine had affected their income. At the same time, the conditions of this working space are per-



Fig.1 - Street occupation in front of the Health Center Cisne Dos - Source: Author 2019

ceived as negative by some inhabitants for whom the streets have become chaotic and messy.

Temporary spaces for recreation

In addition to the emergent spaces and rhythms linked to commerce, inhabitants' recreational practices also significantly shape streets in informally developed neighbourhoods. Active recreation, in general, but football and ecuavoley, in particular, are recurrently played. ¹⁷ These are the most popular sports in the country and Guayaquil, and the studied neighbourhood is not an exception. Inhabitants of El Cisne Dos not only play in a few designated areas in parks and playgrounds but on a diversity of streets. Streets paved surfaces are temporarily transformed into improvised pitches that adapt to varied spatial characteristics and present different use intensities. Several can also have a polyfunctional role as they might serve for *ecuavolley* and football. The popularity of these alternative playing areas is revealed as we observed that the number of pitches within designed parks is less than the total of pitches on the streets.

One such place is Calle Décima, a residential street near the Palanqueado Estuary, surrounded by one and two-storey houses, a sports centre developed by the local government, and a recently renovated church. This street marks the limit of the residential tissue and runs between the two main routes connecting the neighbourhood with the public space next to the estuary. It is 20-meters wide and is the neighbourhood's widest road but not necessarily the one with more motorised traffic. Instead, the marks of three pitches painted on the street reveal it as a recurrent centre for sports more than for intense car circulation. Two rectangles of 9x18 meters and one of 15x30 meters have been painted to configure two areas for ecuavolley and one for football. They are not used on a fixed-time basis, and matches are not synchronised. Sports might be played or not depending on the availability of players, weather, etc. In fact, only one out of the three - the one located in the corner-presents a temporary occupation that repeats on a daily basis.

17 Ecuavoley is a local variant of volleyball.

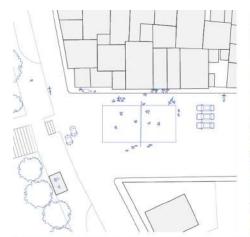






Fig.2 - Street's temporary transformation into an ecuavoley pitch - Source: Author 2019

On weekdays, the morning hours are the moments with fewer activities on this street. Although some inhabitants exercise in the early hours of the day, the street is quiet from 8.30 AM. to 14.00 PM. During this time, the playing areas function as a surface for the circulation of a few private cars and a few pedestrians that move between the sports centre, the estuary area, and the residences around them. In the afternoon, the conditions are different as *ecuavoley* pitches attract individual players and observers that concentrate in and around them. Starting from 2.30 PM, mainly adult men arrive and assemble on the western sidewalk in front of the houses that delimit the playing area near the corner. After setting the net poles inside two holes on the pavement, the net is put by a resident living in the house that borders this pitch.

The movement of people intensifies after 3.30 PM. as more players and observers arrive walking and by bicycle and cars. Some of them would use entrances' house steps as sitting spaces. As more people concentrate around the pitch, other temporary functions start emerging. Mobile vendors, especially those selling juice, come by sporadically. A vendor of roasted plantain locates her mobile selling station at the corner, on the sidewalk. The space is at its peak between 4.30 PM and 6 PM. when a significant number of men wait for their turn to play, a group of four men observe the matches from *Calle F*. At that time the frequency of mobile vendors increases and the accumulation of cars partially blocks the road. Although some players indicated that matches are also set up at night-time, often nobody is playing after 7:30 PM.

On weekends, as a local sports league organises matches on the central football pitch, teams from nearby neighbourhoods participate in a championship that lasts for several weeks. Those days, consecutive games alter the functioning of the complete street as the entire street width is used. Car circulation is temporarily blocked by delimiting the area with a plastic security type. The most significant crowd concentrates around the central pitch in the morning. Some residents gather to chat while observing the matches from improvised porches of the adjacent two-storey houses or the shadowed space below a tree or below an improvised plastic roof. After the matches, at around 6 PM., goals are removed from the road, and car circulation is partially enabled. Many groups would remain interacting near the front of several



Fig.3 - Football players removing mobile goals after a weekend match -Source: Author 2019

houses for some hours.

In *Calle Décima*, people of different ages play and observe the matches developing on any of the three temporary pitches. Although, at first, one could think that neighbours are the exclusive members of these groups, the interviews revealed that many of them live in other nearby neighbourhoods. For instance, Daniel, a middle-aged adult man, comes from 1 Km. away, he lives around *Calle 14 y Calle Francisco Segura*. The acquired familiarity with other players and the availability of players as positive elements motivates him to regularly attend the matches at this place. The degree of diversity regarding players' living spaces contrasts with the homogeneity in terms of gender. Only a few women can be observed around the pitches, and most of them are not directly involved in the matches or any other adjacent recreation activity. Instead, they sell snacks to players or take care of children playing nearby.

As in other bottom-up practices observed in this neighbourhood, the cyclical temporal appropriation in *Calle Décima* involves the participation of inhabitants who set-up and maintain space. Their transforming capacity is determined by the role of mobile devices such as lightweight goals, net poles, and plastic chairs enable these temporary occupations. These elements allow rapid adaptations which are important to respond to unexpected changes. For instance, in 2020, during the pandemic COVID-19, the recreational use of *Calle Décima* intensified considerably with the addition of 4 new ecuavolley pitches on its surface. Accessing the neighbourhood's public sports areas was not allowed during the pandemic. As a response, after the pandemic's peak, a significant number of inhabitants organise to transform the street for their use. Inhabitants added new playing zones through paintings and daily operation of tents, nets, goals, poles, etc.

Conclusion: Engaging with temporary appropriations

In the studied neighbourhood, temporary spaces of transaction and play emerge with no formal designation and design. They alter the conventional character of streets and increase their functional capacity as they can be spaces of movement and short-term permanence. As the examples of this study illustrate, inhabitants of El Cisne Dos engage daily in temporary collective practices essential to the intensity of the

neighbourhood's street life and livelihoods. Different types of activities overlap according to the time of the day and the day of the week, as seen in the case of pitches used only on weekends. Also, each case attracts a different type of public that interacts in various forms. Hence, temporary complex landscapes are configured as multiple functions and temporalities overlap.

The temporariness of the observed appropriations is what allows their recurrence to a great extent. Activities that emerge in *Calle Décima* and *Calle Ch* might be sanctioned or regulated in other public spaces. For instance, informal vendors are not allowed in some renovated parks and streets. Also, mobile or improvised elements – plastic furniture, carts, sports devices– that enable sports or transactions are rarely visible in official parks. The temporarily appropriated streets are made by assembling permanent and impermanent elements. In both locations, the arrangement of portable, mobile, impermanent structures enables temporary individual and collective occupation. Thus, appropriations are revealed as transformative action linked to flexibility, adaptability and openness.

Although informal activities do not comply with the idealised models of conventional notions of public space, they are essential to redefine the meanings of public space and streetscapes. As illustrated in the examined locations, particularly during the pandemic COVID-19, temporary collective practices make visible the capacity of inhabitants to shape their everyday spaces according to their needs and desires. The vitality of streets is contingent on people's efforts to create new opportunities for use through minimal interventions and adaptations. These initiatives are voluntarily organised and managed by inhabitants that negotiate use and maintenance with minimal interference from government administrators, officials, police, etc.

The paper contributes to expanding the understanding of bottom-up practices of appropriation. More explorations of informal neighbour-hoods might contribute to interrogating how to translate the understanding of the contextualised logic to newly designed spaces. Recognising and understanding the logic of collective practices and areas can contribute to delineating conceptual frameworks suitable for the informal context. The understanding from the temporary appropriation of

streets might be translated into other public spaces where the appropriation should be encouraged. A framework for reading public space integrating the forms of appropriation might extend attention to temporary elements and conditions of managing, emergent overlapping of functions and flexibility. This perspective can help overcome an emphasis on the physical layout and standardised aesthetic language. At the same time, it can contribute to interrogating predefined assumptions about long term, static and dominant functions and to looking for temporary transformations emerging from the socio-spatial context.

Temporary collective practices are embedded in processes of spatial and socio-cultural transformation. In the case of Guayaquil and elsewhere in Latin America, change and appropriation have been defining elements of the trajectory of social production and construction of informal areas. Although temporary collective practices on streets are everyday place-making mechanisms, they still have a negative connotation for designers and governments. By embracing the debate on the socio-spatial and temporal conditions for the appropriation of streets, design practice and theory can put forward the role of residents in the making of space. Recognising that temporary transformations are led by residents, their role as passive users might give room for a more active role in the everyday of streets and public spaces. The agency of individuals in the making of space can be highlighted and potentially conducted to a reinterpretation of their role in the definition of the dynamics of urban space.

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The city as a scenario. Streets, squares, and churches in Barcelona

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Abstract

Churches represent an architectural archetype deeply rooted in the urban landscape and in the collective memory of Western society. Even for those who do not frequent them, churches play a fundamental role in the image of the city.

Based on a scientific, systematic, deductive, and inductive study of the 132 parish churches in the city of Barcelona, the aim of this article focuses on those cases where the sacred building and its immediate urban environment form an inseparable entity and are placed at the service of the city. The open-air rooms at the foot of some churches are the perfect setting for celebrating all kinds of festivities without having to build new facilities on purpose. Extending this concept of urban reuse, we present some paradigmatic examples of the wise adaptation of the most significant places in the city for holding collective events in the open air. These examples of practicality, which make the most of the available urban enclaves and elements, thus involving all citizens, are excellent examples of the potential use of the city in general and of the spaces outside churches in particular.

Keywords

sacred architecture, church, public space, collective memory, Barcelona

Introduction

Churches are part of everyday life in many cities. Even for those who never enter in them, in countries with a Western Catholic tradition,

sacred buildings are in the subconscious of the collective urban culture. Perhaps some people do not consider churches to belong in today's world, but they are very important for the image of the city. The repeated presence of sacred temples plays a leading role in the tranquillity and understanding of public space. And churches give an image of familiarity to the city too due to the double fact of being an architectural type deeply rooted in the urban landscape and being strongly integrated into the culture of this society¹.

Urban elements accompanying a church

A sacred building has an area of influence that goes beyond the plot it occupies. Although it is not isotropic and has a dominant directionality, the interior of an *ecclesia* can be understood as a covered public square for meetings and gatherings². Thus, collective life extends outwards, and the adjacent urban space becomes the open-air community room that accompanies the church. This reserve of land is essential not only for the entrance – and above all the exit – of religious and popular events, but it also becomes a place of reference for the daily social life.

Church's impact on the city is so intense that its action on its surroundings begins by determining the name of the urban enclave. Of the 132 parish churches within the municipal limits of the city of Barcelona, more than sixty lend their name – or that of their founding priest, martyr, or patron – to the nomenclature of the city, naming squares, streets, avenues, boulevards, and even roads, neighbourhoods, streams, hills and mountains³. A palpable demonstration of how the importance of a church can literally leap into urban space.

But beyond this nominal contribution, the real dialogue between the religious building and the adjacent space that surrounds it comes to light when the enclave where it is located is analysed in detail and from

¹ RAMONEDA, J. Catalunya postcatòlica. Diari Ara, 12.04.2015. P. Contraportada, Raons. TORRALBA, F.; RAMONEDA, J. L'herència del cristianisme, a debat. Diari Ara, 02.04.2015. P. 18–19

In Greek, the word 'ecclesia' means 'meeting', 'assembly' and it is the word used by the first Christians to refer to the place of meeting.

Appealing to the collective memory, the most relevant example of each case is cited: Plaça de la Sagrada Família, Carrer de Sant Antoni Maria Claret, Avinguda de Sant Ramon Nonat, Rambla de Santa Mònica, carretera de l'Església, Sant Martí district, Riera de Sant Andreu, Turó de La Trinitat and Tibidabo mountain.

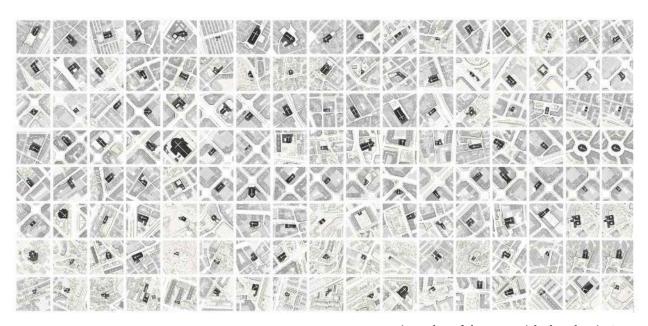


Fig.1 Plan of the 132 parish churches in Barcelona. Author

an urban perspective. In other words, when we study the tension that exists between the church, the type of urban element that accompanies it and the fabric of the common city that houses and links them (Fig. 01).

Broadly speaking, it can be said that there are three types of urban episodes which, with nuances, represent and summarise the entire collection:

The first group is made up of churches that are related to a square, a promenade, or a concatenation of public spaces but which, in short, have in common the fact that they are surrounded by a widening of space while defining it. The sacred facades, despite being part of the temples, belong in a certain way to the squares where they are located, forming such an intense dialogue that they can only be understood as one inseparable entity. A second group is formed by those churches that relate directly to the street. Whether or not they are aligned with the street, on a generic plot or on a corner, they bear witness to the typical section of the built volume of the street. Finally, there is a third group of religious buildings that have no apparent direct relationship with their urban surroundings. These are churches that are camouflaged in the generic fabric, either because the passage of time has literally hidden them in the interior of the block or because their building type does not present much distinction with respect to the neighbouring buildings.

In parallel and superimposed on these categories, there is a fourth group made up of those churches whose relationship with their surroundings goes beyond the square or street where they are located. They are religious monuments that have a presence in the whole neighbourhood or even in the whole city. They are churches that respond to the idea of a sculptural building being more appreciated from an urban than an architectural point of view. So, they are important in the skyline of the city.

In addition to the relationship of the churches with the urban elements that surround them – squares and streets – and the radius of action that they present – configuring symbolic landmarks or camouflaged – there is a third determining factor for the analysis of these enclaves: the relative position of the church. That is, the number of free sides that the church offers to the city. Here the range of options is wide. From churches between half-walls which only have a sacred

façade, to isolated and autonomous pieces which, whether planned in this way from the beginning or not, allow their entire perimeter to be used by the city.

Considering all of this, it becomes clear that most temples try, in one way or another, to surround themselves with empty space, as well as to position themselves to gain visibility. Apart from their own presence, the existence of empty spaces around churches contributes to endowing them with greater versatility and symbolism. Not only because the empty space adjacent to the sacred building becomes a platform on which to extend the liturgical functions, but also because it shapes its image and serves the day-to-day life of the city. In short, it is a singular architectural building, the church, which seeks to be accompanied by a singular urban element, the square.

Obtaining the church square

In the first chapter of the book *Der Städtebau nach seinen künstlerischen* Grundsätzen⁴, Camillo Sitte discusses the relationship between buildings, monuments, and squares. The Austrian architect of the second half of the 19th century uses a series of Italian, French, German and Austrian examples to discern which aspects make some historic cities so balanced and beautiful. First, and before going deeper into the study, he defines three types of squares which, until the Middle Ages and during the Renaissance, were the social, secular, and ecclesiastical centre of the city: piazza del duomo, linked to the cathedral and the parish buildings; piazza della signoria, linked to the civil power; and finally, next to the other two but a little further away, piazza del mercato. Throughout the book, Sitte emphasises the former, analysing through description and redrawing the monuments they contain, the churches that make them unique and the common buildings that make them up. It is from this same starting point and with this same perspective that the present reflection is intended to begin. In other words, it is based on the study of those parish churches in Barcelona that today offer the city a 'duomo square'5 (Fig. 02).

⁴ COLLINS, G.R.; COLLINS, C.C.; SITTE, C. Camillo Sitte y el nacimiento del urbanismo Moderno / Construcción de ciudades según principios artísticos. Barcelona: Gustavo Gili, 1980.

⁵ The same term is used as Sitte, but not only to refer to the Cathedral square, but also to all the places where there is a parish church.

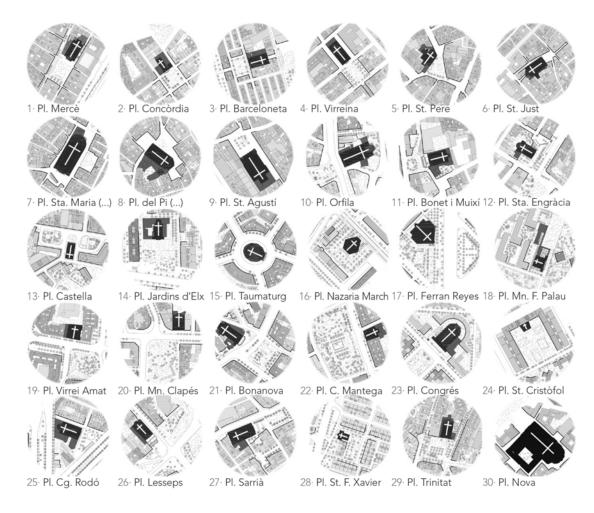


Fig.2 Duomo Squares in Barcelona using the aesthetics proposed by Camillo Sitte in the aforementioned book. Author

There are many types of religious squares in Barcelona: large and small; rectangular, triangular, and amorphous in shape; for passing through and for staying; unique and autonomous and diverse and concatenated; enclosed and delimited and more open and dispersed. Be that as it may, they all have in common the three aspects mentioned: that they sponge the urban space, that they are inseparable from the church and that the façades, despite being part of the religious buildings, belong in a certain way to these squares, establishing such an intense dialogue that the whole can only be understood as an inseparable entity: the square of the church and the church of the square.

This idea, which focuses on the presence of empty space and the walls of the buildings that make it up, appeals directly to the image of the city par excellence, the classic Mediterranean metropolis, the genesis of which lies in the square. So much so that José Ortega y Gasset states that the city does not need to have houses, but only façades as decorations⁶. According to the philosopher, these are the only ones truly necessary to delimit a square, "the artificial scene that the political animal delimits on the agricultural space" and, therefore, the only indispensable to define a city.

Many architects reach the same conclusion as Ortega y Gasset when they analyse the city and express it graphically. Luis I. Kahn, in 1971, in one of the sketches he made for the exhibition City/2 at the MoMA in New York, drew a square with a rough, forceful stroke. The description of the image itself forms part of the drawing, underlining it, acting as a base on which to rest. Text and line form the idea of an open-air room that Kahn wants to convey: the façades of the buildings are the walls, and the sky is the ceiling of this open-air room, within which life is to be found.

In this way, the square becomes the communal space par excellence

⁶ ORTEGA Y GASSET, J. Obras Completas. Vol. 2. Madrid: Fundación José Ortega y Gasset, 2004. P. 408

⁷ This definition, however, only includes those cities which, like Barcelona, are of the 'civil, public, Mediterranean and classical' type. It should not be forgotten that there are also cities of the 'domestic, rural and Nordic' type and those grouped in the 'Islamic' class. For a more exhaustive analysis see: GOITIA, F. C. *Breve historia del urbanismo*. Madrid: Alianza, 1968.



Fig.3 Swing dancers at Plaça Virreina with *Sant Joan de Gràcia* as a backdrop. ballaswing.cat, 2015









Fig.4 Urban planning of Sant Joan de Gràcia, in Plaça de la Virreina; Santa Maria del Remei, in Plaça Concòrdia de Les Corts; Santa Maria del Pi, with Plaça del Pi, Plaça Sant Josep Oriol and Plaça del Pi; and Santa Maria del Mar, with Plaça de Santa Maria, Fossar de les Moreres and Passeig del Born. Author

of the Mediterranean city. From it, the surrounding buildings are transformed into a splendid backdrop for any social and cultural activity that one wishes to carry out, and the church becomes the landmark that symbolises it. And this, in a country culturally accustomed to taking to the streets to celebrate all kinds of festivities, offers the opportunity to use sacred architecture as a scenographic support that is representative of the city and significant for the neighbourhood (Fig. 03).

Sant Joan de Gràcia and Santa Maria del Remei are two clear examples of churches directly linked to a single square – Virreina square in Gràcia district in the first case and Concòrdia square in Les Corts in the second. Both squares face southeast with respect to the main façade of the church and have similar and appropriate proportions according to the artistic principles defined by Sitte. The two churches are also strongly connected by entrance staircases which have a prominent presence in both cases and which, although they may represent an obstacle for the older people who enter the sacred building, have become the favourite benches for the younger ones, the latter being, paradoxically, the most faithful users of the space between the square and the church.

On the other hand, a system of concatenated squares instead of a single, autonomous square is what the parishes of *Santa Maria del Mar* and, above all, *Santa Maria del Pi*, to cite two clear examples of this type found in Barcelona. They are two churches to be seen in fragments, to be walked around or through – since they are almost free–standing – and to note the tension exerted by the religious building on each of the different squares created (Fig. 04).

But not all the parishes mentioned above – nor many of the churches that are now accompanied by a square – have enjoyed this privileged situation from the outset. The demolition of blocks, political and military expropriations, and the abolition of parish cemeteries are often the reasons that have led to the appearance of new duomo squares in the city, and these are the episodes that follow.

Mare de Déu de la Mercè

The demand for empty spaces around churches is helping to make them more versatile, not only in new buildings but also in existing ones. A good example is the parish church of *Mare de Déu de la Mercè i*



Fig.5 - Demolishing work in front of the church of *La Merc*è. Arxiu Fotogràfic de Barcelona, Pérez de Rozas, 1982

Sant Miquel Arcàngel, known simply as Mare de Déu de la Mercè or Basilica de la Mercè. Initially, this church did not have a square. Neither the first Gothic building from the 13th century nor the current Baroque building, erected in the 18th century on the same site, had any empty space to accompany them⁸.

In 1982, in an act of careful urban microsurgery, a block was demolished, providing the church and the whole neighbourhood with more light, health, perspective and, above all, urban use. Mercè Square was born. In fact, there was already a space that officially bears this name although, as the historian Faustino Gazulla rightly points out, " in reality it was nothing more than a very short street, but somewhat wider than the others in the same neighbourhood". However, a few pages earlier, he also exalts its usefulness, claiming the reversibility of functions that it can have: "Sometimes the crowds were so great that it was necessary to cover with cloths all the space between the façade of the church and the houses opposite, so that from the street many devotees who, for lack of space, had to remain outside, could address their prayers to the Virgin' 19.

Ecclesiastical expropriations

There are other examples of the acquisition of squares and the opening of new streets where the link between public space and religious architecture is even stronger. These are cases where the appearance of the urban void is a direct consequence of forced disposals imposed on the ecclesiastical estates. During the 18th century, the Church was the main owner of the city's land. Convents, churches, parish cemeteries and religious schools occupied a considerable area of the Catalan capital, in many areas accounting for more than half of the total area. During the 19th century, however, the situation changed radically due to

⁸ On this site, there are the traces of three superimposed religious buildings: the present church - present since 1765, when the first stone was laid -, the earlier Gothic church - begun in 1265 - and a primitive chapel - erected in 1249, which served as an oratory for the hospital of Santa Eulàlia, the first construction of the Mercedarians in the city of Barcelona.

COMAS, R.N. Monografía del templo de nuestra señora de la Merced. Barcelona: Oliva de Vilanova, 1917. P. 10

⁹ GAZULLA, F. *La patrona de Barcelona y su santuario.* Barcelona: Mariano Galve, 1918. P. 170 i 139

the legal expropriation of ecclesiastical property through a series of government decrees. Perhaps the revolutionary destructions were the most visible and the most remembered aspect, but the sanctions enacted represent the effective action. During this century, most of the convents disappeared, totally or in part, giving way to new streets, squares, and all kinds of public and private buildings, thus altering the shape and density of the urban fabric of the city.

However, and focusing the discourse on the urban key, the forced transfer of public space by the church that most changes the shape and layout of the urban fabric of the city is the one that refers to the abolition of the parish cemeteries. To solve a problem of density and health, the bishop of Barcelona at the time, Josep Climent, with the support of the civil authorities, founded the first cemetery outside the city walls in 1775, located where the Poblenou cemetery is today. Barcelona thus anticipated the Spanish legislation of 1785, in which a government order issued by King Charles III - Floridablanca Law - obliged the suppression of all cemeteries adjacent to parish churches. But the War of Independence (1808–1814) not only interrupted this process, but also made increase buries in parish cemeteries. After the end of the war, in 1819 a new cemetery in Poblenou, designed by the Italian Antonio Ginesi, was inaugurated in accordance with the egalitarian principles of the Enlightenment, and the old parish graves could finally be definitively paved¹⁰.

In this way, a series of public spaces were created within the interwoven fabric of the city. The old graves accompanying the seven parish churches inside Barcelona's walls were freed up and became the new squares of Santa Maria del Pi, Santa Maria del Mar, Sants Just i Pastor, Sant Pere de les Puel·les, Sant Cugat del Rec, Sant Miquel and Sant Jaume. Even though the last three churches have disappeared, the spaces they occupied still remain, remembering their name, and all these seven churches are still of capital importance in the morphology of the squares in old Barcelona.

Thus, in a relatively short period of time, between the end of the 18th

¹⁰ MINGUELL, J. C.; MÀRIA, M. Col·lecció de carrosses fúnebres. Cementiris de Barcelona. Barcelona: Ajuntament de Barcelona, 2013. P. 10



Fig.6 - Map of Ciutat Vella, with current parish churches. All the highlighted areas surrounding them are empty public spaces that used to belong to the Church and were closed off. Author

century and the mid-19th century, either due to the abolition of the parish cemeteries or to the suppression and disentailment of the religious orders, Barcelona incorporated a large part of its urban space by the hand of sacred architecture, linking the singular urban element of the square with the symbolic architectural element of the church (Fig. 06).

Lack of urban emptiness

Unfortunately, many streets and squares adjacent to churches are only used for circulation and not to stay, being used more as infrastructures for passing through than as an open-air room where the socialising and liturgical functions can be extended. There are cases in which the church and the square are segregated by the passage of a road. The presence of a cut between the large empty space and the church door weakens the dialogue and the spatial continuity that should exist between the 'covered square' represented by the church and the 'open-air room' that configures the square. This segregation between the church and the adjacent void was accentuated with the arrival of the automobile and, above all, with the specialisation of the streets, since in most cases, the passageways already existed, but the entire public space was standardised in the form of a paved or sand-covered canvas, and both vehicles and pedestrians could pass through it. Some architects such as Camillo Sitte and Aldo van Eyck praise the conditions of the squares when they are snowed because the snow makes the zoning disappear, favouring freedom of movement and the alternation of uses with all the naturalness that the ancient medieval squares allowed¹¹.

Some of the spaces attached to churches, far from being understood as diaphanous planes free of specialised divisions, are full of unevenness, changes of paving, zoning for specific activities and end up full of fences and perimeter walls. Sants Gervasi i Protasi – popularly known as La Bonanova –, Sant Andreu, and Sant Pius X, represent three very illustrative examples of how a square and a church can be completely sepa-

¹¹ SITTE, C. *Construcción de ciudades según principios artísticos*. Barcelona: Gustavo Gili, 1980. P. 185 LIGTELIJN, V.; STRAUVEN, F. *Aldo van Eyck. Writings*. Vol. 1: The child, the city and the artist. Amsterdam: Sun, 2006. P. 110

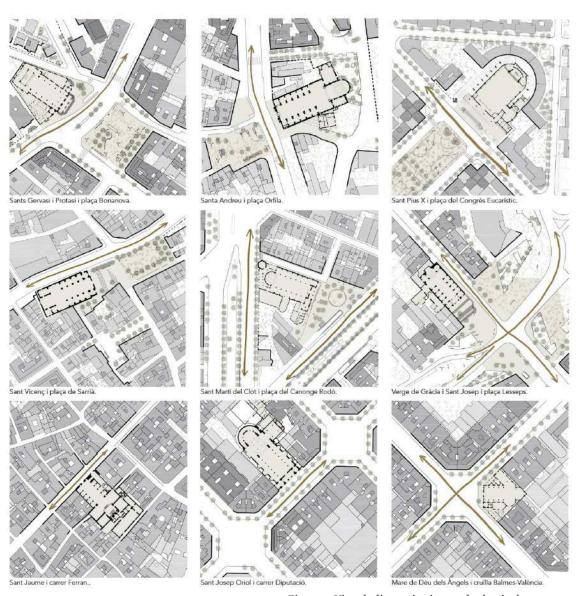


Fig.7 – Visual discontinuity and physical separation between the 'covered square' of the temple and the 'open-air room' of the urban enclaves of: Sants Gervasi i Protasi and Bonanova square; Sant Andreu and Orfila square; Sant Pius X and Congrés Eucarístic square; Sant Vicenç and Sarrià square; Sant Martí del Clot and Canonge Rodó square; Verge de Gràcia i Sant Josep and Lesseps square; Sant Jaume and Ferran street; Sant Josep Oriol and Diputació street and Mare de Déu dels Àngels at the intersection between Balmes and València streets. Author

rated by the passage of a road. In the case of Bonanova's church and square, the disconnection is such that it is not possible to go in a straight line from one to the other, even if one obeys the criteria of a traffic light through a pedestrian crossing (Fig. 07).

As can be seen in these urban enclaves, on other occasions, this cut, although also sharp, is less unfavourable since it passes tangentially. Two representative cases are the parish of *Sant Vicenç*, with the opening of the Reina Elisenda avenue, and the parish church of *Sant Martí del Clot*, between Meridiana avenue and Aragó street.

But there are also enclaves that combine the defects of the two previous ones, with the urban space adjacent to the church being carved up by the passage of multiple roads in various directions. This is the case of the parish church of *Verge de Gràcia i Sant Josep* – popularly known as *Els Josepets de Gràcia* –. This church is the only remaining piece of the primitive Baroque convent of the Discalced Carmelites, established on the road from Barcelona to Sant Cugat, and is the stoic and perennial element that remains in the square and articulates a changing environment that has gone through the most varied forms and dimensions.

Churches with a shoehorn

However, the church between party walls, which only shows the main façade to the city having serious difficulties in obtaining empty space to configure the entrance atrium, is the sacral type that has been inserted into the grid of *L'Eixample*. But Ildefons Cerdà, in his treaty, refers to the street not only as a place for passing through, but also as a public space, as a place for relationships and coexistence and as a servant atrium for the dwellings. The multifaceted figure saw in the great infrastructure that he proposed the binomial of circulating and remaining, which is why he differentiated 'road' from 'street', specifying that they were not synonymous words. Cerdà emphasised the complexity of the second term (street), which encompasses the first (road) plus the buildings that limit it, box it in and, above all, make up the courtyard leading to the house. In what was to become the first modern treatise on town planning, he wrote: "The street must be considered by all the facultative in charge of studying the project of reform, enlarge-

ment or foundation of a city under the double concept of courtyard or courtyard of the house and public road"12.

Although nowadays the one that appeals to car traffic has more weight, there are also examples that show that sometimes they can be humanised: weekly or street markets, occasional open-air shows and commemorative events make cars stop exceptionally and force a change in the appearance and use of streets and squares to put them for a time at the service of traders and neighbours of the neighbourhood. As suggested by the Habitar research group, the street can be tamed, moving it away from its infrastructural configuration and bringing it closer, through urban elements and social activities, to its condition as a place¹³.

Masses in the street

Some of the religious ceremonies of yesteryear linked to the public space still take place periodically in our country using many places and streets: blessings, processions and patron saint festivals are part of the collective imagination and popular Mediterranean culture (Fig. 08).

At the other extreme of this ceremonial, theatrical and playful use of religious manifestations in the street, would be the vindictive or extremely necessary aspect. On the one hand, news from Latin America shows us the celebration of masses in the street to attract the attention of politicians. The outdoor space adjacent to the churches is used to demand, through the celebration of the Eucharist, an unjust situation. On the other hand, the transfer of the religious celebration to the street can be a response to a situation of need. In 2010, an earthquake seriously affected the temples of Chile, and the alternative for liturgical life not to be interrupted was the public squares. Many of these ceremonies took advantage of the side or the main façade of the church itself as a backdrop. In Barcelona, during the years after the Civil War, light canvas structures were used to convert the spaces outside the churches into emergency churches too (Fig. 09). The result of these Eucharistic

¹² CERDÀ, I.; SORIA, A. *Cerdà: las cinco bases de la teoría general de la urbanización*. Madrid: Electa España, 1996. P. 104-106 13 HABITAR. *Rehabitar en nueve episodios*. Madrid: Ministerio de Fomento, 2012. P. 97



Fig.8 – Palm Sunday in Santa Maria del Mar, Barcelona. Author, 2012



Fig.9 -Sant Marcel Parish Church, Barcelona. Communion for twenty children. While work is being done on the church, the liturgy is celebrated in the open air, in the courtyard. 1979, Parish archives

translations to the street is the closest thing to what Kahn called "the street as a community space".

Beyond a situation of protest or emergency, another example of the practical use of public space to organise a religious event can be found in Barcelona. In November 2010, the city established a strategy of using streets and squares during the visit of Pope Benedict XVI, on the dedication of the Sagrada Família church. Various urban settings were adapted, with just a few elements, to host the multitudinous event. The Cathedral square became a large open-air space, with the balcony of the Episcopal Palace as a tribune. But, above all, the streets and squares around the dedicated church were filled with folding chairs and screens to follow the ceremony. And in front of the Nativity façade, a simple outdoor altar was set up to host one of the episodes of the dedication: the Angelus. In fact, Gaudí had already designed this church in such a way that the religious images traditionally found inside a church were transferred to the outside. Thus, the four façades become altarpieces depicting the life of Christ. The adjacent streets act as the atrium of the gentiles and the citizens can watch the Gospel episodes from the street.

The clever organisation also entailed the establishment of a timetable. By cones, light fences, banners, ribbons or moveable traffic signs, leaders and volunteers changed the use of streets and squares for a few hours, and then re-established traffic and, with it, daily activity. If we compare this episode with some of those that took place during the International Congress in 1952, we will find remarkable strategic similarities, even though more than sixty years have passed. And we can also compare it with the ceremony taken place few months ago (December 2021) when *Sagrada Família*'s star was lightened. Multiple cultural events were taken place in the surroundings of the street using it as the courtyard Cerdà stated. Might they not be good examples to extrapolate to many other activities in urban space? (Fig. 10).

These examples of practicality, which make use of the available urban enclaves thus involving all citizens, are excellent examples of the potential use of the city in general and of the spaces outside churches in particular. This is not the time for costly constructions and large temporary infrastructures, which are useless for future events. Flexible and reversible elements such as canopies, chairs, fences, ribbons, cones, paint for the ephemeral treatment of the pavement or screens, together







Fig.10 -Comparison of three religious and cultural celebrations outdoors *Sa-grada Família*: an open-air mass during the Eucharistic Congress in 1952; another one celebrated by Pope Benedict XVI in 2010; and popular dances to celebrate the lighting of the star of the tower in 2021. *Sagrada Família* archive

with a good organisation and management of the times of occupation, are sufficient to welcome a good number of people in a dignified manner.

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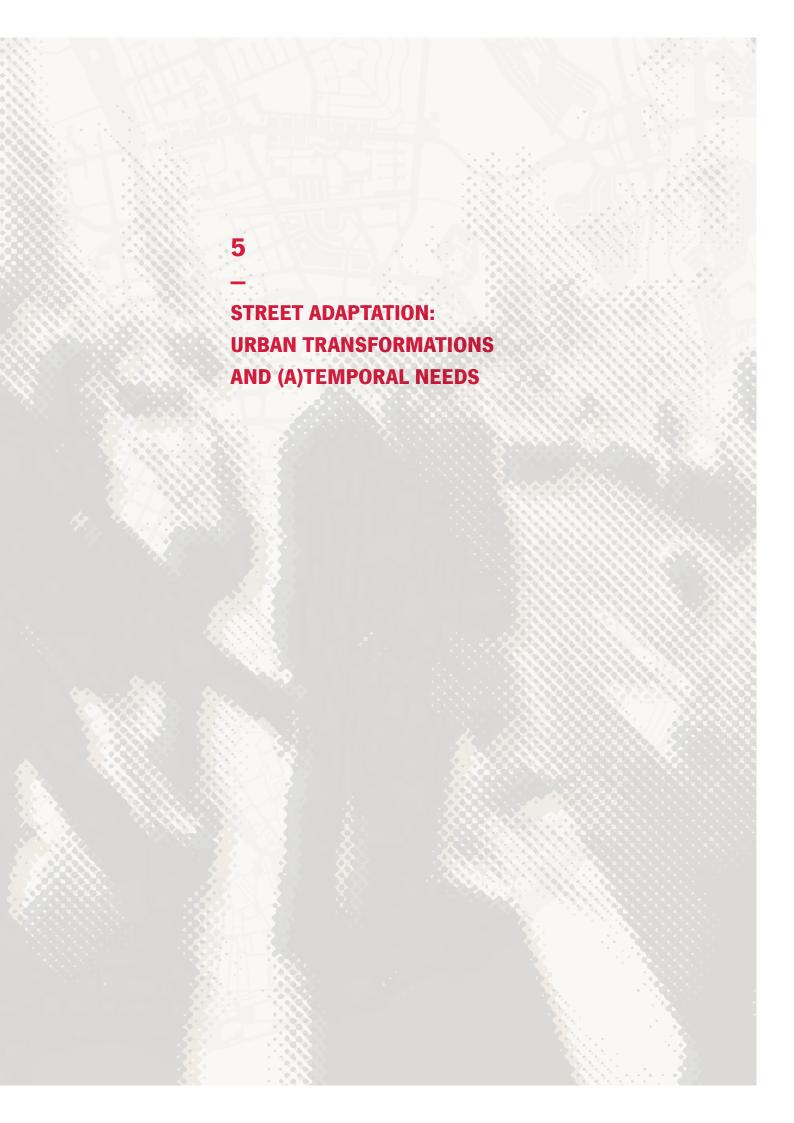
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Where the grid meets the water: socio-economic opportunities on New York City's waterfront

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Abstract

New York is one of many cities with an urban environment that is composed out of a grid, dividing the land into uniform, rectangular building blocks. This paper investigates the conditions and qualities of the spatial deviations that occur within the rigidity of this grid plan. More specifically on the grid's extremities, where it intersects with the coastline. The juxtaposition of water and land in a grid city potentially creates unique spatial conditions where streets become dead ends, where public becomes private, where inside becomes outside. This paper looks into how the interruption of the high level of uniformity of a grid can generate unique scenarios of small-scale social and economic activities.

New York City is used as a case to identify these smaller-scale processes. The city's post-industrial waterfronts, their unique (dead-end) streets and deviating building geometries are investigated by their unprecedented opportunities for small socio-economic activities, their overlap scenarios in public and private relationships, their tolerance for marginal situations, and their freedom for personal appropriation of space.

This paper investigates streets that deviate from the standard rigidity of the grid as enablers of small-scale socio-economic activities. Conclusions and insights are formulated regarding the value of these unique spatial conditions in relation to the inclusion of minority groups and activities in the metropolis.

Keywords

Borders and Boundaries, Collective Spaces, Grid plan, United States of America, Architecture.

Introduction

The grid city

New York is one of many cities that is established by a grid plan. First

implemented in the early 19th century under the name of the Commissioners' Plan, a grid was superimposed onto the existing urban fabric of the city (Fig.01). The grid structured Manhattan's mainland by a system of perpendicular streets and avenues, dividing the land into similar rectangular building blocks. An initial statement by the Commissioners articulates the intention of the grid for the island: "A city is to be composed principally of the habitations of men, and strait-sided and right-angled houses are the most cheap to build and the most convenient to live in". As Hoffman sees it, "[t]he map of the plan creates the illusion of a flat and barren landscape with the grid representing the building of a new order; essentially no consideration was given to the space upon which it was being imposed"2. By the initial design and implementation of the grid, topography nor existing constructions or property lines were taken into account. Today, almost two centuries after the initial implementation of the Commissioners' Plan, the pattern of streets in New York City remains nearly the same. About this definitive structuring of the urban land into a grid, O'Grady states:

By setting the initial partition of land into uniform rectangular blocks, grids limit individual incentives to form incompatible subdivisions. Adherence to the grid reduces irregular property shapes, increases connectivity, and helps coordinate a network of standardized property measurement, definition, and addressing. Furthermore, grids encourage investment through their predictability of expansion and ease of making uniform subdivisions to replicate construction processes.³

Grid cities seek their benefit in the system's repetition, easy division of properties, accessibility, clear vehicle and pedestrian fluxes, affordability of sewage and electricity provision, and so on. The main focus lies on structure, readability, and predictability. The limited deviations that occur in this systemic grid are often carefully implemented by planning. An example is the introduction of parks, stretching over several building blocks, or the implementation of a diagonal avenue like Broadway in New York, Avinguda Diagonal in Barcelona, or Grand Avenue in Chicago. However, in a city like New York, there are simultaneously several less planned exceptions to the grid's uniformity, that are defined by the natural conditions of the land. One of these exceptions is studied



Fig.1 - The Commissioners' Plan proposed as dominant grid, superimposed onto the existing island of Manhattan. Streets are intersected by the coastline - Source: Commissioners' Plan, 1811, Public domain

in this paper: the interruption of the grid by the coastline. The original design of the grid did not modify its rigid form to existing natural situations. Instead, the streets and avenues were abruptly interrupted when they encountered the coastline (Fig.01). This paper looks into the spatial deviations that occur on the city's waterfront, and the consequential unique social and economic processes that take place within these streets on the city's fringe. The aim is to articulate lessons that can be drawn from the interrupted uniformity of a grid in a metropolitan city like New York.

The juxtaposition of water and land in a grid city

While the grid has defined the inland of the city with a system of order and repetition, New York's waterfront has posed an important exception to this uniformity. In theory, whenever the waterline intersects with the grid, unique spatial conditions are created. For instance, normally continuous streets and avenues become dead ends, while otherwise rectangular building blocks gain new geometries, smaller in size, often with one edge following the coastline. The waterfront becomes a hybrid deviation to an otherwise homogeneous urban fabric. In practice, a combination of two trends is visible in waterfront planning in New York: (1) coastal areas that exist out of a fragmented urban layout of dead-end streets and new geometries, and (2) coastal areas that exist out of larger-scale linear configurations by, for instance, highways and public parks.

This paper considers the former as an example of a border condition, and the latter as a boundary, based on the definitions by Stephen Gould⁴. Gould distinguishes borders and boundaries in natural ecology, where "[t]he boundary is an edge where things come to an end, while the border is an edge where different things interact"⁵. In natural ecology, a waterfront is usually a border, where the interaction between water and land creates unique conditions, for instance by increasing local biodiversity. In contrast, in urban planning, the waterfront is often considered a boundary. Whenever the coastline is used as the location for large infrastructures, a harsh transition between water and land is created. While neighborhoods with softer border conditions are those that have a more hybrid spatial character and smaller transformation pro-



Fig.2 - A portion of Brooklyn's waterfront, with a smaller-scale mixture of land uses, stakeholders and activities, combining water and land conditions - Source: Painting by Harry Shokler, 1934, Public domain

cesses (Fig.02). Over time, both scenarios have manifested in New York.

The next paragraph starts by exploring the ways in which coastal neighborhoods in New York have transformed themselves over time, either as boundary or border conditions. Subsequently, neighborhoods with softer border conditions are analyzed by zooming in to their street configurations. The waterfront's border conditions are studied as a place where the two contrasting elements of water and land meet, overlap, start to interact, and create unique conditions for the city. The streets that are located at this juxtaposition of water and land are studied by their qualities of enabling unique social and economic scenarios in comparison to the inner city. The distorted building blocks are studied by their new geometries, their built and unbuilt space, their relation between inside and outside, between public and private.

New York City's waterfront – boundary and border approaches

Waterfront neighborhoods form the membrane between water and land. This specific location, their unique levels of (in)accessibility, and their anomalous spatial conditions within the grid have historically resulted in them being protagonists during important events of transformation of the city (Fig.03). Both by targeted city planning, as by gradual bottom-up transformation, the waterfront has repeatedly distinguished itself from the inner city.

The waterfront as boundary: Historic city planning

Over history, the waterfront of New York has often been considered as a residual zone, as a place for activities that are not necessarily linked to daily city life, or a place to implement larger infrastructures and systemic approaches.

In the aftermath of the waterfront's industrial decline during the Great Depression, the 20th century coastline of New York came under the attention of city planners for reclamation of the former industrial land by top-down redevelopment. During that time, the coastline has mainly been approached by its linearity, by its metropolitan scale. During the interbellum, large infrastructures for vehicular traffic were introduced to the coastline by city planners like Robert Moses^{6,7}. Spatially, these interventions changed the waterfront drastically. The for-

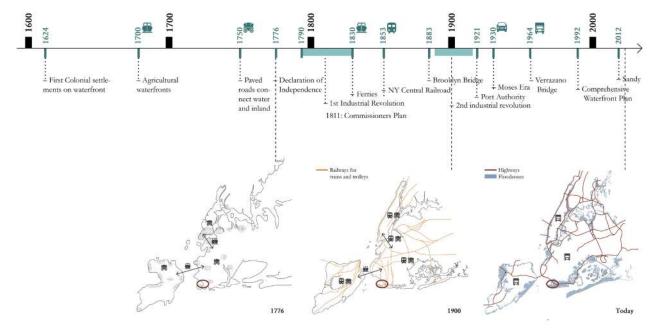


Fig.3 - New York's waterfront played a protagonist role during important moments of transformation over history - Source: Author, 2019

merly fragmented building blocks and industrial piers were replaced by a reinterpretation of the waterfront as a linear stretch of land. The large scale of the new highways formed a clear boundary between the intricate small-scale local neighborhoods and the water. Because of these 20th century interventions, contrasts in scale between (inter)metropolitan infrastructures and local activities and buildings remain visible in New York's urban fabric to this day. This is most pronounced in proximity to the waterfront and at the touchdown of bridges and tunnels.

Recently, a new global trend of a boundary approach for the water-front has emerged. In recent decades, environmental conditions have been changing rapidly, affecting the built environment of urban water-fronts⁸. Climate change is a prime example of an unsolicited stress⁹ that New York City is dealing with, and that heavily impacts cities globally¹⁰. Following a growing awareness of the consequences of climate change, a city's waterfront has become a strategic location for adaptation or mitigation to its impacts. New York, among many other coastal cities, has to adapt to new realities of endangered coastlines, rising sea levels, increased precipitation, floods, and storms. Since it is the waterfront that forms the buffer between the threat (the water) and the city, systemic solutions by linear, boundary approaches, stretching over the coastline, are a logic response.

The waterfront as border: Interrupted streets, unique scenarios

At the same time, impacts following climate change (like super storm Sandy in 2012) have made it "shockingly clear that the socially vulnerable also live in the most environmentally vulnerable places". Because of the waterfront's unique conditions, many coastal neighborhoods have, over history, become home to a hybridity of stakeholders, whom are often part of social, ethnic or economic minority groups. In these cases, the coastline of New York functions as a hybrid border condition, which is in stark contrast with the larger planning decisions that consider the waterfront as a boundary. The origin of the border conditions can predominantly be found around the second half of the 20th century, in the aftermath of industrial decline. The decrease of industrial activity on the city's waterfront, in combination with complicated land ownerships, a lack of individual capital and waning interest in investment, has pushed large portions of New York's waterfront into a state

of limbo. Instead of large investments and development projects, many (post-industrial) waterfront neighborhoods transformed on a much smaller scale, attracting more marginalized social situations. Initially, this often resulted in a rapid increase in unemployed inhabitants, higher crime rates, drug-abuse, and homelessness on the fringe of the city. However, in several places, this higher tolerance and smaller scale of transformation resulted in locations where freedom of speech, creative outlets, social inclusion, and deviations from the norm were hosted. By squatting vacant warehouses and appropriating industrial piers on the Manhattan west waterfront, the LGBTQ+ community, artists and teenage runaways of the 1970s found a place to express themselves in the city12. It was also at this same time (and earlier) that the cheap waterfront land was used by the federal government to build public housing towers to respond to the pressing demand for affordable housing for lower-income families. Together with the immigrant families that still lived on the waterfront in the wake of its industrial past, the edges of the city housed a multitude of social and ethnic minority groups. That is how the waterfront of the late 20th century became a platform for self-expression and social and cultural inclusion. At other moments in time, the waterfront has been home to artists, homeless people, drug abusers, and the overall 'misfits' of society during their times. This is the reason that, until this day, many vulnerable social groups and small-scale businesses remain located on the waterfront.

Within the spatially interrupted uniformity of the grid, on the outer edges of the city, social and economic deviations to standard city life have manifested on countless occasions. The following paragraph looks into the spatial conditions of the streets in the interruption of the grid, hosting these unique smaller-scale processes of transformation.

The border's streets as tolerant hosts

The border of the city is easily depicted as less qualitative and messy. As Sennett states it clearly:

When we imagine where the life of a community is to be found, we usually look for it in the centre of a community; when we want to strengthen community life, we try to intensify life at the centre. The edge condition is seen to be more inert, and indeed modern planning practices, such as seal-

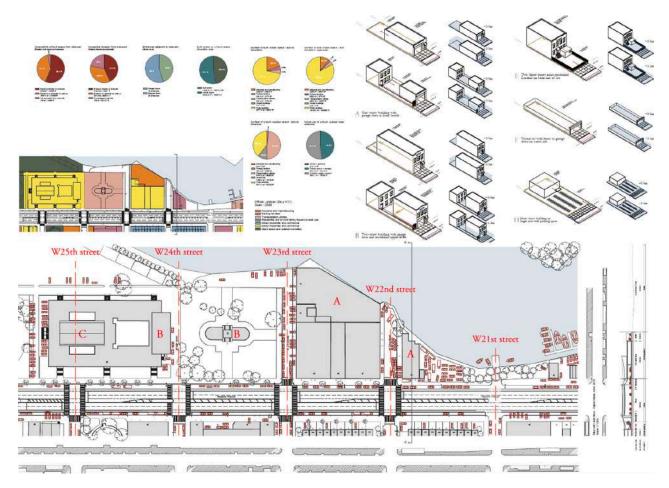


Fig.4 – Mapping of activities, built space, typologies, zoning and land use, and use of space at the juxtaposition of water and land in Coney Island, New York - Source: Author, 2021

ing the edges of communities with highways, create rigid boundaries lacking any porosity. But neglects of the edge condition – boundary thinking, if you like – means that exchange between different racial, ethnic, or class communities is diminished.¹³

Starting from this realization, the following part looks into bottom-up, gradually transformed border areas on New York's waterfront, and explores small-scale processes that take place within their deadend streets. Note that many locations on the city's coastline have already been drastically redeveloped in light of real-estate projects, parks, or recreation, changing their former border identity to a boundary. However, several post-industrial neighborhoods have, so far, been exempted from top-down redevelopment and maintain atypical spatial configurations and small-scale social and economic processes. Examples of such areas include Coney Island Creek in Brooklyn, Port Morris in The Bronx, Port Richmond in Staten Island, and parts of the neighborhoods of Gowanus Canal and Red Hook in Brooklyn.

A most telling example are the dead-end streets around Coney Island Creek, located in the south of Brooklyn. This is an example of an area where the grid is interrupted by a coastline, in this case by the Coney Island Creek. By mapping the Coney Island Creek's coastal area between W20th and W27th street (Fig.04, Fig.05), its unique configuration and operation becomes visible. Because of the interrupted grid, both W22nd and W23rd streets become dead ends (Fig.04). These streets are surrounded by small businesses, mainly in a car-related sector. The accessibility and yet privacy and personal freedom of use of a dead-end street is appealing for small businesses in these sectors. W21st, W24th, and W25th streets even completely disappear because of permanent privatization by new spatial layouts. The footprint of the buildings, located on these waterfront plots, are no longer bound to strong property delineations or the outline of their rectangular building block. Some buildings gain an angled wall that follows the coastline (Fig.04, A), other buildings are constructed with an offset from the property line (Fig.04, B), and some buildings exceed their original block, occupying former streets and more land (Fig.04, C). This highlights a first example of locally increased tolerance for irregular property shapes and built

constructions in the extremity of the grid.

Simultaneously, unique conditions of public and private relationships can be found within these disruptions of the grid's uniformity (Fig.05). The more southern, inland building blocks obediently follow the property lines by either the buildings' facades or by fences. A clear distinction is made between private property and public space (Fig.05, B). While the building blocks directly adjacent to the water of the creek have much more complicated public-private relationships. Whereas streets and sidewalks are by definition public space, the dead-end W22nd and W23rd streets are privatized by appropriation. By opening their garage doors and extending their working space onto the sidewalk, small businesses privatize the public space by use (Fig.05, A). In many occasions, the dead-end streets are used for parking, storage, workspace, or for permanent extensions of a building or its techniques onto the sidewalk (Fig.06). The local businesses are tolerated to expand their territory outside of their private property limits, generating larger productive space for these small businesses with limited financial means.

Additionally, in terms of social activities, the area around Coney Island Creek also highlights a significant shared use of public space by local inhabitants. The extremities of the dead-end streets, next to the water, are used for fishing or for employers' lunch breaks. At the water-front property between W23rd and W24th street - where the building has a large offset from the property line - the building block's unbuilt space is intensively used for gatherings, community gardens and organized neighborhood barbecues and events.

Taking into account that the median household income in Coney Island (\$40,430) is 38% under the average for New York City (\$64,850), and the local poverty rate is 28.9%¹⁴, this means that the area is home to many socially and economically vulnerable families and businesses. However, the combination of the area's remoter location and the spatial deviations in the extremity of the grid, creates unique scenarios and opportunities for small businesses, and increases the living conditions of the local residents. The area's affordable property prices and the high tolerance for alternative infill of space in the dead-end streets allows for low-revenue businesses and low-income families to find their space in the city of New York.

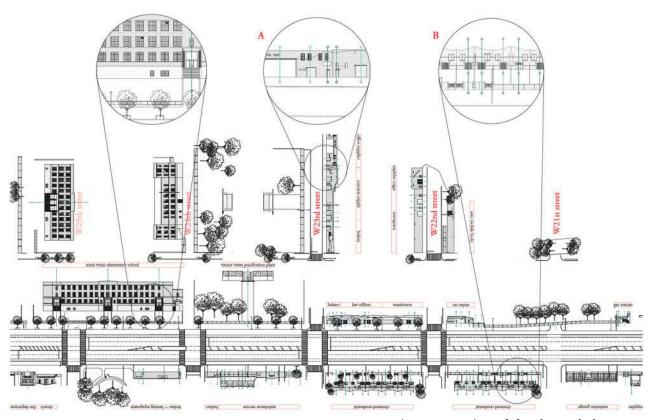


Fig.5 – Mapping of facades and the transition of private to public at the juxtaposition of water and land in Coney Island, New York – Source: Author, 2021



Fig.6 – Screenshots from Google Streetview show appropriations of the public space in W22nd and W23rd streets, Coney Island, New York – Source: Google Streetview, edited by author

Similar trends of deviant and smaller-scale social and economic processes are visible in multiple (dead-end) streets of the aforementioned post-industrial waterfronts of New York.

Conclusions: Lessons from the border's streets

The spatial deviations that occur on the waterfront of a metropolitan city with a uniform grid plan causes streets to become dead-ends, and building blocks to gain new shapes and sizes. However, what is most relevant, are the consequential unique social and economic processes that these spatial deviations host. In a metropolis with a pressing demand for more housing, skyrocketing property prices, rapid displacement of minority groups, and extensive gentrification, deviations to uniformity and predictability of urban life are highly necessary. It is only in these unique urban locations, with a high tolerance for marginalized situations, that widespread social and economic inclusion can be ensured. In that sense, at New York City's juxtaposition of water and land, the streets have provided small-scale and unique windows of opportunity, they have welcomed changing societal and economic conditions, and they have hosted minority groups and local transformation processes.

This paper has demonstrated that the interruption of uniformity can generate increased hybridity in an otherwise rigid urban configuration. Therefore, areas located on the waterfront – where the coastline intersects the systematic grid – have historically often transformed into spatially, socially, and economically diverse areas. Areas that have a higher tolerance for transformation and appropriation to take place on the scale of the user, of the street, of the building. They have become hosts for activities and users whose interests would otherwise not be met in the city. They have welcomed minority groups, low-income families, 'misfits' of society, and other people and businesses who would otherwise not find a place within the city.

As a result, border neighborhoods that challenge the uniformity of a grid plan become representations of the actual pressing social and economic needs and lacks of the metropolis. Because these neighborhoods – especially in comparison to the inner city – are tolerant for more marginal situations to take place, they represent what and whom is

missing, or has less potential in the city. Their transformational and hybrid character makes them highly valuable sources of information regarding the actual needs of the city at the current time, especially on the smaller scales. Be it the need for housing for immigrants during the 1930s, the inclusion and acceptance of the LGBTQ+ community and artists in the 1970s, or the need for affordable and accessible working space for small businesses that are being outpriced by large chain stores in the 21st century; the border areas unveil these lacks. Therefore, from the perspective of architects, designers, or politicians alike; learning from neighborhoods that deviate from standard uniformity can drastically increase our understanding of the city. It can enhance the role that one plays as a designer, as an architect, as decisionmaker, in terms of creating a resilient and inclusive city.

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Framing urban autopoiesis: street as a track for multiple adaptive cycles

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Abstract

Street is the elementary domain of urban complex systems adaptation. It frames all phases of urban evolution, as they can be described by an adaptive cycle conceptual model: a forward loop, including growth and conservation phases, and a back loop, covering release, or crisis, and a reorganization phase.

Urban dynamics are not composed of a unique adaptive cycle, as cities evolve through multiple ones, having different timescales, as well as many periods and durations. The whole of these cycles, deployed *on* and *in* streets, unfold street rhythms, which present time is the synchronic representation.

This communication will address multiple adaptive cycles intertwining in street life, identifying three main paths: (i) urban fabric forming process; (ii) ground level uses; (iii) public space appropriations, ephemeral occupations and activities.

Diachronic analysis of each path is carried out on the main case study of one street in Rabat, Morocco. It will be discussed by investigating change drivers and mechanisms, adaptation figures and resources, evolutionary phases and rhythms, persistence layouts.

The main goal is to figure out street evolutions dynamics and parameters in the framework of autopoiesis concept, as well as to highlight the role played by street in framing urban autopoiesis.

Keywords

urban morphology, urban forming process, public space, adaptation, autopoiesis

Introduction

Systematic observation of adaptation phenomena along a street aims at questioning the mechanisms of adaptive process within the theoretical framework of urban autopoiesis. This focuses on street not just as a physical element, but as a component of a systemic process operated

by local organisation actions and reactions, of which it represents the founding structure. Street has, thus, a double meaning: it is the spatial structure shaping urban interactions and, at the same time, it is the product of such interactions, the synchronic projection of the whole systemic process.

Systematic observation herein presented concerns adaptation mechanisms and rhythms of a street in Rabat, Morocco, and particularly of a part of Sidi Mohammed Ben Abdallah Avenue. This is carried out through two synergic methodologies of investigation, to highlight actions, outputs, variables and factors that build up the taxonomy of the adaptive process: diachronic and comparative analysis of historical cartography and housing type plans; present analysis of practices and forms *in* and *of* the street.

Urban local adaptation: a theoretical framework

City is one of the main examples of a complex adaptive system¹. It is a set of interacting elements, whose relations are based on an action-feedback mechanism such as to determine the behaviour of its actors. It is also characterized by two principles, self-organization and amplification of the effects, explaining every configuration as determined by the previous one².

Street is a sub-system of the city, defining – and defined by – the territorial location of its actors³. It affects the possibility and the quality of the whole urban system elements interactions⁴, as it limits a set of relations that are more likely to be established, due to accessibility and proximity. By this, it shapes the ecological participation of its users, as "a state of mutually oriented interdependence of a plurality of actors who are not integrated by bonds of solidarity to form a collectivity but who are objects to one another"⁵.

Street system is thus more likely to an ecological system rather than a social one, whose behaviour could be appreciated through ecological resilience mechanisms. This theorical model⁶ postulates two characteristics particularly effective in describing urban dynamics⁷: adaptation as a primary evolutionary mechanism; persistence as a measurement of resilience, based on state variable thresholds.

Adaptability provides a basis to analyse self-organisation mechanisms. It is the capacity of a system to reorganize itself within his sta-

bility domain, based on the capacity of the actors to use historical memory and drive change towards a desired direction⁸. In response to environmental forces, actors within a system modify individual action relating to favourable or unfavourable outcomes of previous adaptations, pursuing the maximization of individual effectiveness by the minimization of environmental resistance⁹. Adaptation actions are thus communicated to the system, which modifies its behaviour in relation to them¹⁰. Self-organized whole order emerges from the sedimentation of a myriad of such individual choices, in response to a precise set of housing, production and relational needs¹¹.

Adaptation is strictly linked to self-organisation and autopoiesis. Autopoiesis may be referred to how urban structure and morphology are created, transformed, organised and proceeded12. Having been defined as the capacity of a living system to recursively reproduce through its own elements¹³, autopoiesis concept can be applied to social, organisation and interaction systems, abstracting from life and defining it as a general form of system-building, using self-referential closure14. Furthermore, Luhmann identifies communication as a founding element of social systems, instead of persons or actions¹⁵. Similarly, inner relations – personal, commercial, business, well-being – are the base elements of urban systems and of street sub-system. Hence, autopoiesis is to be intended as the production process of urban relations as well as of its founding structures - every artifact making cities - based on self-referential operations. The duplication of the same elements of a system, as elementary unit replication, is an autopoiesis feature. The criteria of such evolution – what element to be duplicated and how, e.g. the reiteration of row houses along a matrix path¹⁶ – depend on system structure, whose self-determination is due to self-organization¹⁷.

Local adaptation is an observable phenomenon of system self-organization. Adaptation is concretely acted and registered in system's historical memory, as to shape future system structure and reproduction. It is an infinitely iterative mechanism, made of successive adaptive cycles made of two proactive phases, i.e. expansion and conservations, and two reactive ones, i.e. release and spontaneous reorganization. Reorganization phase of adaptive cycle includes learning from historical memory, built heritage, functional habits, to manage present transformations and establish new relations or artefacts, whose consequent

feedbacks will produce new learning. This builds up a self-referential process, operated within the system, while environment just acts as external force. An autopoietic system is strictly linked to its environment, as it adapts according to external variations, while keeping its internal organization¹⁸.

Across those cycles, some variables of the urban system change to react to external variations, depending on autonomous reorganization. Nevertheless, there are some slow-changing variables, linked to systemic values (e.g. identity, culture and awareness) and to the physical structure of space, that have higher inertia and influence system ability to manage change in a non-destructive way¹⁹. These are the milestones to define autopoiesis, as, by persistence, they shape system identity.

Systematic observation aims at grasping such specific characteristics of both street structure and organization: identifying adaptive cycles and highlighting their periods, actions of adaptation, outputs, persistence and change factors. Observation focuses on three main domains: urban forming process, ground floor activities and public space practices; they deploy physical, relational and functional factors making urban unicity, and managing shift from a state regime to another²⁰.

The goal is to outline autopoiesis trajectory – how street evolved producing new relations ad artefacts – as well as the founding role street had in framing it.

Observation: street adaption phenomena

Rabat, Morocco: Avenue Sidi Mohammed Ben Abdallah in Yacoub el Mansour district

Rabat has had a quite recent metropolitan growth. Fitted in its traditional form until it became the capital of the French protectorate in 1914, it didn't reach significant dimensions even with the first colonial plan by Henri Prost. The metropolitan extension begun in 1940s, in response to the huge demographic growth driven by colonial economy, until the first organic plan for the Rabat–Salé conurbation was designed by Michel Ecochard in 1948. The plan identified three expansion districts for the emerging working class – Yacoub el Mansour and Takaddoum in Rabat, Tabriquet in Salé – to be realized through an evolutionary habitat concept, the *habitat pour le plus grand nombre*, including three



Fig.1 – Aerial photo of Yacoub el Mansour district in Rabat, 1967 – Source: Photothèque ENA, Rabat

models: the *trames sanitaires*, consisting of urban infrastructure and plots pattern design for self-made dwellings; the horizontal low-rise patio houses fabric, inspired by traditional morpho-typology; the vertical city, made of modern high-rise buildings.

Sidi Mohammed Benadbdallah avenue is one of the main axes of Yaboub el Mansour district on the south-west side of Rabat. The analysed part goes from Avenue Assalam to Rue Al Karam intersections, focusing on the specific urban fabrication process, as result of the late protectoral planning. This is expression of modern planning theories, but actually inspired by traditional city morphology, to which the entire Ecochard work in Morocco is committed²¹. It is characterized by the juxtaposition of residential single units on small-scale plots, organized in progressive clusters following a fractal principle inspired by Medinas. Particularly, Sidi Mohammed Ben Abdallah avenue is defined by three distinct operations led by the Service de l'Urbanisme: the construction of a square, bordered by commercial galleries and a mosque; the settlement of a cité horizontale fabric, on one side of the street, made of Modern patio houses on 8 meters squared plots organised in clusters, centred on a small square; the settlement of trame sanitaire plots on the other side, to recover Douar Debbagh slum, depending on minimal public intervention principle: a 6 meters square pattern, equipped with hydraulic network and a toilet, on which small barracks with conical straw roof are built prior to the self-construction of hard-wall houses.

The main avenue is more a circulation route rather than a structuring path, faithful to the modern principle of the separation of flows, as highlighted by geometric misalignment between the axis and the plots.

(i) Urban forming process

Michel Ecochard single-unit houses won't last so long. The conservation phase of the new neighbourhoods has been marked by strong demographic pressure which the now independent public planning of Morocco is unable to cope with. This triggers a series of local adaptation processes of the urban structure left by Ecochard, driven by a singular dialectic between public actors and inhabitants:

- Saturation of initial houses patios, allowing to extend accommodation capacity;
- 2. Saturation of the *trame sanitaire* plots by self-construction;



Fig.2 Horizontal city design. Service de l'habitat, Rabat Yacoub el Mansour, General plan of the site between avenue « D » and avenue Sidi Mohammed Ben Abdallah, 1951 - Source: Archives du Maroc



Fig.3 – Trame sanitaire : Service de l'urbanisme, Rabat, Lotissement indigne Yacoub el Mansour, General plan of « Douar Debbagh » new plots – Source: Archives du Maroc

3. Raising up of Ecochard patio houses and self-built ones, involving the typological transition to row houses, the loss of the patio as a centripetal element, the extroversion of domestic space onto public space by facades opening.

Illegal adaptations have been tolerated from local administration, due to combination of lack of control and acknowledgment of housing needs. Furthermore, typologies arising from adaptation have been accepted and transposed in new housing policies, marking the transition towards a new adaptive cycle. The implementation of 8 meters plots and the elaboration of new type-plans in 1964, providing inhabitants with the typological scheme for multiple floors houses, establish a new expansion phase based on the outcome of the previous cycle spontaneous reorganization. In 1971 the Ecochard plots ended to be considered as temporary, and in 1973 the first post-independence Rabat urban plan incorporates the former evolutionary habitat²². Thus, dwellings continued to be built on 8 meters or smaller plots, settling 3 to 4 floors terraced houses known as modern Moroccan houses (maisons modernes marocaines)23. Street evolution keeps a consistent urban structure, based on the original 6 to 8 meters plots, accommodating medium height individual row houses.

Further adaptive phase consists of the progressive shift from individual to collective housing through two different steps:

- 1. Subdivision of row houses in apartments, one per floor, with the consequent sharing of entrance and staircase;
- Recasting of adjacent units in multi-plots collective buildings, with the redefinition of circulation paths leading to two or more apartments per floor.

Diachronic analysis based on historical cartography²⁴ measures changes of several variables: (i) urban structure, made blocks pattern and street network; (ii) plot pattern, based on initial 8x8 Ecochard's grid; (iii) urban form, building height and shape; (iii) dwellings typologies, evolving from patio houses, row houses, collective housing on single or adjacent plots; (iv) urban space boundaries: façades porosity and rhythms. Persistence or change of such variables lead to evaluate street morphology adaptive process. They describe by which patterns and rhythms street informally moved from low rise individual houses to collective housing.

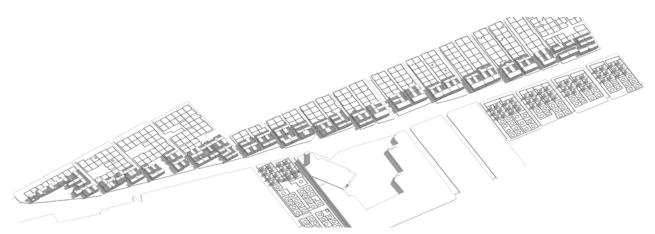


Fig.4 – Sidi Mohammed Ben Abdallah avenue in Rabat: diagram of original plot patterns – Source: Ahmed Amahzoune, Luca Maricchiolo, 2022

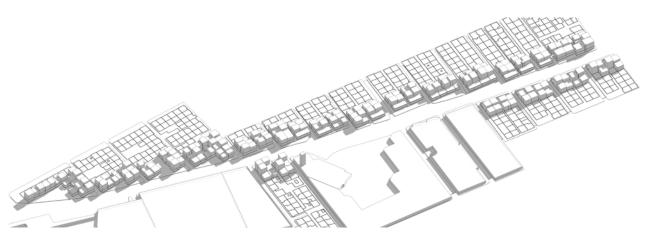


Fig.5 – Sidi Mohammed Ben Abdallah avenue in Rabat: diagram of present urban morphology – Source: Ahmed Amahzoune, Luca Maricchiolo, 2022

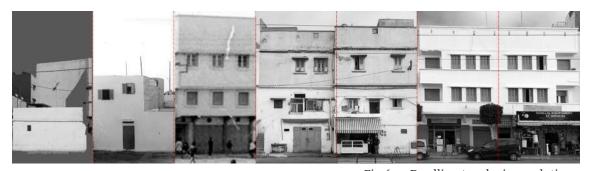


Fig.6 – Dwelling typologies evolution, from ground floor patio houses to collective housing, since 1950s to present time. Photocollage – Source: Author, 2022

(ii) Ground floors activities

Typological evolution of housing passes from individual ground-floor houses to collective buildings, horizontally split into apartments. Public domain undergoes as many changes: the activation of systemic processes based on local feedbacks creates dynamics of public space, not foreseen in the original design. This had planned public activities in specialised spaces at the hearth of neighbourhood units, according to Modern principles²⁵. There was no provision for a network of activities along streets, since housing fabric had a purely residential function.

Such functional micro-zoning is called into question by adaptive process. Original enclosures have been quickly saturated. Low density represented the widespread resource for adaptation, permitting to infill new functions:

- Increase of accommodation capacity by the saturation of plots, without altering residential function;
- 2. Opening of some commercial spaces and artisan ateliers on ground floor, set in the patio or in the domestic space;
- 3. Attribution of ground floor to commercial activity, as a result of horizontal subdivision of the building;
- Extroversion of productive space, according to public openness opposed to familiar intimacy, involving opening of large storefronts on ground floor walls;
- 5. External projection of commercial space, through showcases, tents, terraces, exhibition of merchandises, making the front sidewalk a sort of private pertinence.

Mapping of present activities, compared with the original micro-zoning²⁶, leads to evaluate change or persistence with regards to a further set of variables: (v) functional diversity, based on ground floor uses, i.e. residential/commercial/productive/tertiary; (vi) ground floor density, passing from patio house low soil occupation to intensification in use of ground for both housing densification and change of use; (viii) accessibility, from exclusive for inhabitants to open to the city. The variation or persistence of these indicators describes the quality of the functional adaptation of the public space, evaluating the transition from a mono-functional space to a selective mix of uses.



Fig.7 – Ground floor uses evolution. Photocollage – Source: Author, 2022

(iii) Public spaces appropriations

The positive feedback of ground floors adaptation impacts space organization and uses in the street. It attracts visitors, implements new businesses, drives a mixed informal and formal economy, feeds the adaptive process. Feedbacks foster synergies and concentrations in main streets as Sidi Mohammed Ben Abdallah avenue. A former eccentric street, relative to neighbourhood centres, becomes a subsequent matrix path. The functional division of the street into specialized spaces for different flows is systematically subverted by a multiplicity of forms of appropriations of space, that can be classified by type and temporality. A first category of street adaptation consists in permanent occupation of public space through informal new hard-wall volumes for shops. In free spaces, and particularly in the gap between the orthogonal plot and the diagonal street axis, small constructions were built either as extensions or new installations, detached from the front by a small passage. In some cases, the addition of commercial volumes constitutes a new urban front, sometimes arcaded, which overlap a new gallery on the rhythmic scan of the plots, unifying closest blocks through a gate on perpendicular ways.

A second category of street section adaptation differs for technology and temporality of appropriation. A series of light constructions stands in front of the hard-walled volumes: kiosks in recycled material, metallic and textile tents, glass and aluminium verandas, wooden platforms, are either extensions of ground floors activities or independent business directly installed on sidewalks.

The third category of adaptation is the ephemeral occupation. Café's terraces occupy sidewalks seasonally, parking lots allow the installation of hawkers for weekly markets, boutiques thresholds are employed by boxes and showcases on daytime; during the month of Ramadan, the square becomes a space for prayer, commerce is reduced, restaurants close during the day, removing their tables from sidewalks to extend those onto the roadway after *ftour*. The five-to-ten meters band facing urban front hosts a mix of uses, very flexible in uses, which can be ordered as a succession of temporalities²⁷. The ambiguity – even regulatory – of space expresses a great diversity of rhythms and geometries. The experience of the street is an overlap of noises, sensations, sounds and encounters, featured by several variables, as duration, uses, type of



Fig.8 – Public space appropriations. Photocollage – Source: Author, 2022

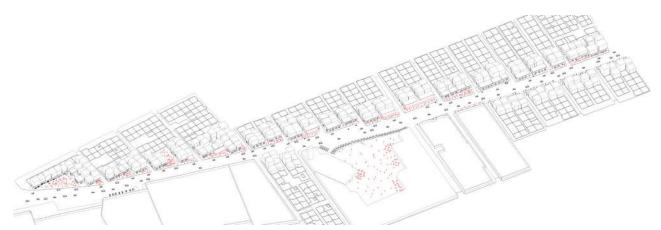


Fig.9 – Sidi Mohammed Ben Abdallah avenue in Rabat: diagram of ground floors activities – Source: Ahmed Amahzoune, Luca Maricchiolo, 2022

merchandise, extension (punctual or linear), shape and construction.

Direct observation on day and night time allows to grasp two further variables to describe the whole adaptation process: (ix) public space hierarchy, evident in the gain of importance of the main axis, a former circulation path expected to remain aside of public centralities; (x) public space occupation, challenging the street regulation.

Observation results

The diachronic analysis and present observation unfold multiple adaptive cycle deployed *on* and *in* the street. These have been classified on three categories on the basis of the spatial domain of deployment and the temporal scale of duration. Phenomena restitution highlights further parameters associated to each cycle: the crisis triggering back loop phases, main adaptation actions, the temporal scale of the cycle and the forms and figures that spontaneous reorganization has taken. The quality of the transformation is measured according to change rate of the ten above mentioned variables, adopted as adaptation indicators. Moreover, among these, each adaptive process is based on some factors acting as a resource for adaptation, linked to slow variables of change, thus steering the adaptation²⁸.

A taxonomy of adaptive cycles allows to relate adaptive actions with outputs, resources for adaptation and persistence variables. (Table 01)

From the taxonomy of local adaptation phenomena, through chronological localisation of few events²⁹, we can draw a diagram of temporal deployment of the adaptive cycles of the avenue. Although the set of information is not precisely quantifiable for the entire period, the diagram provides qualitative insights on persistence rhythms and duration. The notion of persistence, declined on a local temporal scale, identifies variables that persist in at least one adaptive cycle. Local persistence variables are slow variables on a larger time scale. General persistence is a limit case of the long periodicity of change. (Table 2)

Discussion

Adaptation, persistence and change

Synoptic view of the adaptive processes of Sidi Mohammed Ben

Adaptive	Action of	Outputs of	Drivers	Local	Local	Adaptation
Cycle	adaptation	adaptation		change	persistence	resources
Urban forming process 1	Saturation (densification)	Roofing of inner patios	Urban population growth	Dwelling types	urban structure, plots pattern, urban form	Buffer space exceeding initial needs
		Substitution of initial barracks with ground- floor hard- walled houses	Private means increase	Dwelling types, urban form	Urban structure, Plots pattern	Plots space, urban infrastructure
Urban forming process 2	Rise up (densification)	Building of 3- to-4 floors row houses on low- rise initial patio houses	Urban population growth, private means increase	Dwelling types, urban form, facades porosity	Urban structure, plots pattern,	Basement, redundancy of urban infrastructure exceeding initial needs
Urban forming process 3	Subdivision (densification)	Split of row house into collective housing with one apartment per floor	Urban population growth, Households composition evolution	Dwelling types	Urban structure, plots pattern, urban form, facades porosity	Staircase sharing
Urban forming process 4	Recasting	Unification of adjacent row house in a multi-plot collective building	Increase of private means	Dwelling types, Facades porosity or pattern	Urban structure, plots pattern, Urban form	Juxtaposition, small scaled plots
Ground level transformation 1	Intensification (densification)	Increase of housing capacity	Urban population growth	Ground floor density, dwelling types	Urban structure, Plots pattern, urban form, functional diversity, Accessibility	Buffer space exceeding initial needs
Ground level transformation 2	Change of use	Attribution to productive activity to ground floor	Economical needs	Functional diversity, dwelling types	Urban structure, Plots pattern, urban form, ground floor density, accessibility	Redundant space in the house, small scaled plots
Ground level transformation 3	Extroversion of commercial space	Opening of showcases and windows	Economical needs	Accessibility. Public space hierarchy, dwelling types	Urban structure, Plots pattern, urban form, functional diversity, ground floor density	Boundary of urban space, small-scaled plots, urban paths hierarchy
		External private appropriation	Economical needs	Accessibility, Ground floor density	Urban structure, Plots pattern, urban form, functional diversity	Redundant space on sidewalks
Public space appropriation 1	Permanent occupation (densification)	Commercial building construction on main axes	Economical needs	Plots pattern, urban form, public space hierarchy and occupation	Urban structure, functional diversity, dwelling types	Redundant space of urban pattern gaps
Public space appropriation 2	Temporary occupation (densification)	Kiosks, tents, verandas, platform	Economical needs	Public space hierarchy and occupation,	Urban structure, plots pattern, urban	Redundant space of urban pattern gaps,

Table 1 – Taxonomy of street adaptations – Source: Author, 2022

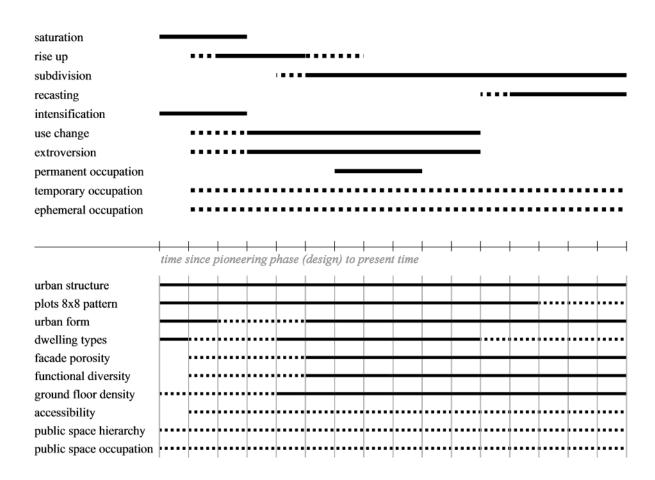


Table 02 – Chronological diagram. Section A (top) shows major deployment of adaptation actions. Section B (bottom) displays changing (discontinuous) or persistent (continuous) variables – Source: Author, 2022

Abdallah avenue in Rabat allows to grasp the evolutionary trajectories of the urban street system. Different adaptive cycles, specialized for resources, drivers and activated processes, overlap on different time periods, showing indicators of local variability and persistence. Local variability identifies fast changing variables. On the contrary, local persistence describes slow changing variables, thus state variables whose transformation, over the decades, has been sporadic, slower or fainter.

As a limit state of slow change, the following variables of street structure are identifiable as persistent:

Plot pattern: from pioneering phase (design) to nowadays, plot patterns kept its initial structure, acting as a resource for change and as a main factor influencing urban form adaptation in its shapes

Urban structure: despite hard transformations, public space geometry remained almost unchanged, as it is recognizable by comparing Ecochard plan with Google aerial photos.

Furthermore, those processes describe a global densification trend, in land and housing density increase, in primary functions, in street activities and frequentations. Densification trend testifies to a positive feedbacks chain, expressed in the categories of population attractiveness, commercial appeal, economic growth. Positive feedbacks feed adaptive process, which generated further positive feedbacks, stimulating the whole process, according to the effects amplification principle.

Adaptive factors in cultural and economic fields are the resources for such positive dynamics:

Small plots scale, allowing easier installation, management and transformation as relate to the population economic means;

Tight rhythm of plot patterns, strengthening neighbourhood relations;

Buffer and redundant spaces, providing physical resources for adaptation;

Urban structure, translating fractal Medina's structure to easily establish space progression and hierarchy from main axis to inner public space, which are consistent with local urban tradition;

Horizontality of management process, due to lack of public control and weak regulation, admitting informal action.

There are obviously mutual relations between persistence characters and adaptation factors, as, generally, slow changing variables depend on system identity. Some of those remained consistent across change, influencing adaptation and being exploited as resources in further configurations. Some others have been spontaneously recreated, as the linear disposition of commercial activities along the avenue to the detriment of initial local centralities, as well as of the less attractive main square.

The nature of persistence variables can be discussed in the theoretical framework of urban self-organization and autopoiesis. Adaptation feedbacks rule the production of new relations and the success of the existing ones. The evolution of the analysed street is built up through replication of urban syntaxes - hierarchies, paths, activities - and artefacts - patterns, buildings, ephemeral objects - matching both self-determination and self-referentiality principles. First, the process has not managed by planning, being driven by inhabitants after Ecochard founding plan in 1948. Then, although driven by external forces, as demographic, political and economic changes, it is locally operated on local sources: adaptation draw solutions from Ecochard design, as well as from traditional city: main transformation towards hierarchical progression from commercial road to inner fabric depends on the relationship between diversity and intimacy expressed in the fractal structure of the traditional city: matrix path of the souk was spontaneously recreated along the avenue Sidi Mohammed Ben Abdallah.

Conclusion

Adaptation actions and outputs profile an autopoiesis trajectory and describe the role of the street as an accumulation path. This leads to draw few conclusions and research perspectives from a design point of view.

Firstly, self-referential closure revealed the deepest identity of the city, reproducing living secular habits that had inspired Ecochard planning³⁰. Autopoietic public space carries a *metis*³¹ value³², that arises from intuitive adaptive ability³³ and could unfold future adaptation paths. Modeling of autopoietic features, as well as mapping of adaptation

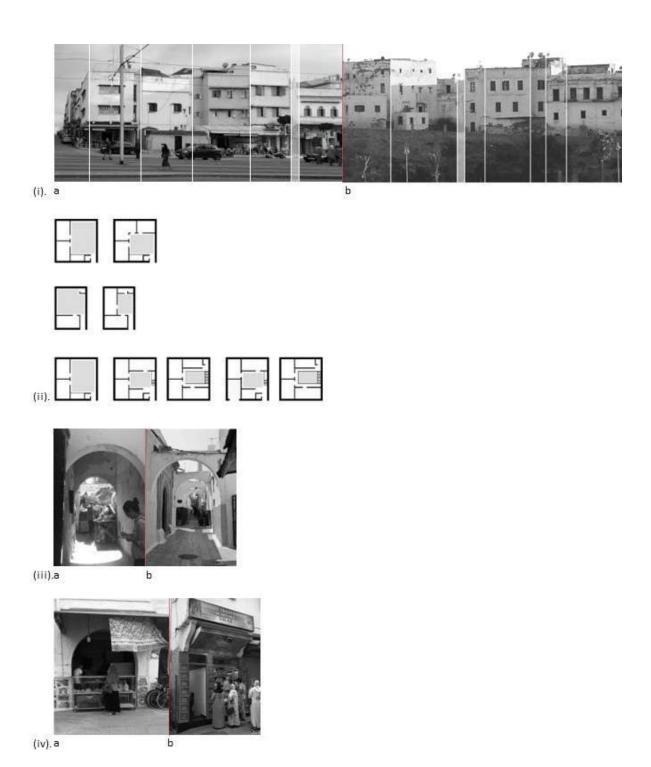


Fig.10 — Self-referential closure. (i) Street and skyline rhythm: a. Sidi Mohammed Ben Abdallah avenue; b. Rabat ancient medina; (ii) Dwelling typologies evolution, from Ecochard to present time; (iii) Public space shape: a. Sidi Mohammed Ben Abdallah avenue; b. Rabat ancient medina; (iv) Commercial typologies: a. Sidi Mohammed Ben Abdallah avenue; b. Rabat ancient medina — Source: Author, 2015–2022

resources by parametric tools, should provide a strong basis for urban design, foreshadowing adaptive possibilities facing present time uncertainty.

Furthermore, the autopoietic trajectory displays a trend towards human-scaled urban space. Self-organized process does not follow an a priori project, but it acts according to the ability of each element to adapt its behaviour by taking advantage of environmental change³⁴: persistence is not just inertia, is more likely an active organization, an energetic effort to maintain the identity, and consequently the form³⁵. There is, thus, an implicit idea of purpose in urban self-organization³⁶; in Rabat inhabitants realized their own urban aspirations through informal actions ³⁷. The expressed trend offers a gaze on contemporary city and complexity intuitive management: it outlines a model of a tight urban fabric, made of small buildings and spaces, intense rhythms, pedestrian paths, proximity, densification, functional *mixité*, and it conveys an idea of a certain ambiguity in space regulation and a strong simultaneity in uses, being relevant for consumption reduction.

Finally, street confirms the founding role it had in urban history³⁸. As it had marked the formative processes of European medieval city, systematically based on the pioneering colonization of a matrix path, persisted in subsequent evolutions, the comparison with the Rabat casestudy highlights the recurrence of the same transition process, passing through the settlement of small single units along a street, their implementation, the recasting of adjacent units, the genesis of linear collective housing³⁹. Self-organization depends on likelihood of relations established within the urban system. Hence, defining ecological participation, street is an accumulation path for systemic interactions, and as such it frames autopoiesis and directs morphogenesis.

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cooperated in the data systematization at the International University of Rabat.

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Continuity and innovation in the Avenue des Champs-Élysées project

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Abstract¹

Street is the elementary domain of urban complex systems adaptation. It frames all phases of urban evolution, as they can be described by an adaptive cycle conceptual model: a forward loop, including growth and conservation phases, and a back loop, covering release, or crisis, and a reorganization phase.

Urban dynamics are not composed of a unique adaptive cycle, as cities evolve through multiple ones, having different timescales, as well as many periods and durations. The whole of these cycles, deployed *on* and *in* streets, unfold street rhythms, which present time is the synchronic representation.

This communication will address multiple adaptive cycles intertwining in street life, identifying three main paths: (i) urban fabric forming process; (ii) ground level uses; (iii) public space appropriations, ephemeral occupations and activities.

Diachronic analysis of each path is carried out on the main case study of one street in Rabat, Morocco. It will be discussed by investigating change drivers and mechanisms, adaptation figures and resources, evolutionary phases and rhythms, persistence layouts.

The main goal is to figure out street evolutions dynamics and parame-

This paper should be considered in the context of the research carried out by G.B. Cocco, in the field of Urban project studies in Italy and France, and of A. Manca's investigations on the theme of modification of public space. Therefore, the paper was conceived by the authors with unity of purpose. For practical reasons, the *Introduction* and *Conclusions* have been written jointly; *Architecture-city*, a paradigmatic approach to Urban Project is to be ascribed to G.B. Cocco; *Avenue des Champs-Élysées* (1664–2022) to A. Manca. The iconographic apparatus was conceived by G.B. Cocco and A. Manca and realised by the latter.

ters in the framework of autopoiesis concept, as well as to highlight the role played by street in framing urban autopoiesis.

Keywords

Architecture-City; typological and morphological invariants; Urban facts; Paris; ecological transition

Introduction

The architectural debate periodically focuses on specific paradigms, products of the time of reference and emerging instances. These aspects find in the city the preferential context of affirmation, since it and its design are the expression of the vital needs of the community and the creation of the environment in which people live. This consideration finds in the theme of the street a particularly interesting object of investigation, because not only from its analysis is it possible to understand the evolutionary dynamics of urban morphology, but those of all aspects of city life.

In recent years, an ecological trend has emerged, which with the promotion of the European Green Deal has found clear institutional support; a growth strategy that aims to transform the European Union into a fairer and more prosperous society, reconciling economic and environmental needs. In this sense, a series of practices have been adopted to reduce the consequences of the human load - primarily pollution - in territories and cities. Ecological transition has thus become the pre-eminent demand for the evolution of urban contexts. This strategic step shows a problematic condition on the project field: design choices can lead to a transformation of places, compromising the coherence with the needs that generated them, and the concepts of duration and permanence of the author's idea and work. This critical aspect is extremely evident in historically consolidated Urban facts. This perspective raises questions about the priorities of urban design and, in relation to this, about the possible balances between design principles and orientations aimed at improving environmental conditions and the visions of European urban thought. But, in this scenario, good practices emerged, which, while responding to new requirements, preserved the city's identity and memory. In light of this, the study, considering the street as the preferred research context, investigates

the orientations that the project can adopt to establish itself as an uninterrupted story based on the relationship between continuity and innovation and capable of preserving and emphasising the specific aspects of single Urban facts. The investigation hypothesis identifies this coherence in the recognition and preservation of morphological and typological invariants, considering the city –and the street as its synecdoche– as a complex artifact on which the Urban project acts through overlaps and insertions.

The first part of the study, entitled Architecture-city, a paradigmatic approach to Urban Project, starts from the identification of a series of pairs capable of translating the most important design orientations of the last decades and the innovative aspects of each. Among these, in addition to the current ecological transition, in order to provide contemporary practice with orientations capable of fully satisfying emerging demands, the research recognises the greatest relevance to the architecture-city paradigm. This is the product of the debate that, starting in the 1960s in Italy and subsequently spreading across Europe, focused its interest on the relationship between architectural typology and urban morphology, becoming the premise of the cultural thought underlying the city project. Regarding the latter, attention is focused on its ability to research and act on the peculiar characteristics of the existing, through the consideration of urban history, its evolution dynamics and the relationships it constitutes with communities. The theoretical argument sees the complementary contribution of two important exponents of European design culture: Aldo Rossi and Bernard Huet. The reasons for this dialectic can be found not only in the relevance of the two authors on the theme, but also in the synergic evolution of the individual perspectives, developed and consolidated over time. Finally, turning our attention to the theme of the street, the study highlights its role as a peculiar element of Urban architecture, a relevant expression of the spirit of the times and generator space of the city.

The second part of the study, *Avenue des Champs-Élysées* (1664–2022), moving on to the design level, is based on the critical observation a of this place, highlighting its generative characteristics and modifications over time. The analysis focuses on the last two phases, which reflect the two main approaches commented on: the 1992 project, the result of

an international competition won by Bernard Huet, and the redevelopment project recently proposed, but not yet realised, by Philippe Chiambaretta *Reénchanter les Champs-Élysées*. The interpretation of these two interventions and their interrelation shows how the character of continuity –semantic and syntactic– of the project, a fundamental aspect of the intervention in the 1990s, remains always clearly visible even in the subsequent modification, although the latter is based on different principles. This coherence is possible through the preservation of typological and morphological invariants; an operative tool suitable for controlling and avoiding the possible drifts previously outlined and an example of appropriate design practice. In fact, it is capable of expressing the paradigmatic character of Urban architecture: an uninterrupted narrative founded on the relationship between continuity and invention.

Architecture-city, a paradigmatic approach to Urban Project

Five paradigms for the city project

Architecture has always had the task of providing answers to complex conditions which, through form, are capable of bringing together aspects of an environmental, social, political and economic nature; over the last century this prerogative has seen the focus of different design approaches. The architectural debate, in fact, appears to be periodically based on specific paradigms and it is possible to identify some of them, explicable through the dialectical pairs: architecture-construction, architecture-city, architecture-landscape, architecture-digital sphere, architecture-ecological transition.

The first, architecture-construction, is an explicit reference to the principles of rationalisation and the guidelines proposed by the *Charter of Athens*. The couple architecture-city finds its theoretical relationship in the urban thought of the Italian school, and interprets the architectural practice as listening to the context and the project as a dialogue with the existing. The third, on the other hand, interprets the place of meaning of architecture, as architecture on a large scale and the project as an operational tool capable of working towards multiscalar formal configurations². The architecture-digital sphere dialectic emphasises

² Vittorio Gregotti, *Il territorio dell'Architettura*. (Milano: Feltrinelli, 1966).

the breaking down of space-time frontiers, introducing the 'architecture of connectivity'3, which brings together the three spatial realms of mind, world and virtual network. The last in terms of time is the architecture-ecological transition paradigm.

Although the theme of ecology is not new to design sciences, in recent years the cultural debate has emphasised the essential need to move from a development model based on the intensive exploitation of environmental resources to one that assumes, protects and enhances natural capital, with the aim of protecting the wellbeing of living creatures and inhabited territories.

This process, which has numerous fields of application, also requires architecture and the city to reflect and move from theory to practice. According to many studies, the concept of urban metabolism is at the basis of the change, an approach that considers the city as a living and evolving organism, in which all the components are thought of in systemic terms, through a profound understanding of their relationships⁴.

The context outlined and the assumption of this paradigm therefore poses the problem of how to act considering the openness it imposes on a multiplicity of different instances and themes. The risk is that this will generate radical transformations of the urban environment, which may irremediably cancel out the peculiar characteristics of the pre-existing elements.

It is therefore necessary to identify appropriate methods of action in relation to the built heritage and its evolutionary dynamics, which, mediating between continuity and innovation, are capable of respecting the material and immaterial historical legacy, carrying out the role of preserving the distinctive features of the architecture and the city. The will to act in close synergy with the existing, starting from the reading of the environmental pre-existences, and from them to produce the modification, is the marking feature of the Urban Project and

³ Derrick De Kerckhove, *Architettura dell'intelligenza* (Torino: Testo & Immagine, 2001), 18.

⁴ Sabine Barles, "De la chimie urbaine à l'écologie territoriale : deux siècles et demi d'analyse du métabolisme urbain," in *Quand l'écologie s'urbanise*, ed. Joëlle Salomon Cavin, Céline Granjou, (Grenoble: UGA Editions, 2021), 63–94.

coherent manifestation of the architecture-city paradigm; a consideration that becomes the condition to define the adoptable approaches towards the ecological transition.

In the mid-1950s, in the pages of *Casabella Continuità*, Ernesto Nathan Rogers interpreted architectural practice as inseparable from listening to the context and design as dialogue with the existing, affirming the visceral relationship of the project with history, memory and tradition, the only materials capable of elevating it to the status of 'manifestation' of the environment that generated it and in which it is established.

Form, history and memory. The dimension of complementarity

In his book L'Architettura della città, eleven years after Rogers, Aldo Rossi definitively states the importance of the relationship between Urban project, history and community, defining the city as a "construction based on the complex elaboration of Urban facts over time, in an inseparable relationship between history and community".6 In Rossi's vision, Urban facts are the stratification of the collective memory of peoples that transform space over time and the city is the locus of memory, linked to facts and places. The complexity of Urban facts and their unicum contribute to the creation of experiences of the city; each Urban fact is perceived individually and subjectively and the sum of these experiences contributes to the definition of the city as a collective work of art. This last concept and the observation that Urban facts "are a construction in matter, and despite matter, of something else: they are conditioned but conditioning"7 substantiates Rossi's most important lesson: the idea of a constant and uninterrupted evolutionary relationship, so that the architecture of the city cannot ignore its derivation from the past and its ability to influence future developments.

In describing Marcel Poéte's research, Aldo Rossi refers to the concept of the continuity of Urban facts, which for him represents their most evident characteristic, as well as their *raison d'être*. The reference

⁵ Ernesto Nathan Rogers, "Le preesistenze ambientali e i temi pratici contemporanei," *Casabella-Continuità* 204, (1955): 3-6.

⁶ Aldo Rossi, L'architettura della città (Padova: Marsilio, 1966), 9.

⁷ Ibid, 25.

to Poéte, is important both in Rossi's discourse and in the theoretical foundation of the research presented. The author's vision, in fact, suggests a genetic idea of urban evolution and, basing itself on the vitalistic metaphor, assumes the presupposition of 'permanence' as the legitimation of transformation, since it is shaped by human events and is the profound expression of the life of the city.

This condition, characterised by unpredictability, refers to a constitutive idea: the soul of the city, for which knowledge of the city means its discovery, "an uninterrupted thrust of unexpected change and crystallisation of its creative evolution". For Poéte, Urban facts are the historical facts used to reconstruct the formation and evolution of the city, since they are the result of a selection, a concept that Rossi appropriates when he defines them as "indicative of the conditions of the urban organism; they constitute a precise datum, verifiable on the existing city", deriving from it the theory of persistence, based on a continuous reading of the city and architecture and a presupposition for a general theory of Urban facts. What persists in the transformation processes constitutes, therefore, the Urban fact par excellence and in this key, persistence is at the basis of the urban organism.

This last passage, present in *L'Architettura della città*, can be traced back to Pierre Lavedan, who, in the third chapter of *Qu'est-ce que l'urbanisme*¹⁰, defines the law of persistence of the plan, according to which cities conserve their fundamental planimetric structure, interrupted only by local transformations¹¹. Although Rossi does not contemplate a historicist approach for the constitution of his urban theory, he nevertheless finds in urban history the most appropriate way of interpreting the structure of the city in its current form and in its making over time. Permanence, the past we still experience, however, cannot exist without the 'unpredictable change' of which Poéte speaks. This difference with respect to the city of the past makes it possible to understand the soul of the city, also understood by Rossi as that which resides beyond

⁸ Marcel Poéte, *Paris*, son évolution créatrice (Paris: Vincent & Fréal, 1938), 7.

⁹ Rossi, L'architettura della città, 44.

¹⁰ Pierre Lavedan, Qu'est-ce que l'Urbanisme. Introduction à l'histoire de l'urbanisme (Paris : Laurens, 1926).

¹¹ Rossi, L'architettura della città, 45.

the structure of urban facts, in coherence with the specific Italian debate of the 1960s that generated urban thought. Therefore, the elements of permanence and the 'soul of the city' can only be read by being situated in the present, in the unstoppable flow of change that acts by intrusions and grafts.

From these considerations, urban thought burst into the international cultural debate, finding in France the contribution of Bernard Huet. In the research presented, the latter is of great relevance, not only for his contribution to the advancement of thought on a theoretical level, but also because he is the author of one of the design evolutions of the case study that will be discussed below. Greatly eloquent, for the full understanding of the architecture-city paradigm, is the essay *L'Architecture contre la ville*¹².

In it we read the need to introduce the Urban project as a means of mediation between city and architecture: the first is based on continuity and permanence in time and space; the second, on the other hand, appears discontinuous, linked to events, to movements of force, to rapid cycles of institutional, functional and aesthetic transformations.

The element capable of reconciling this apparent contradiction is the architectural type, a structure of correspondence and mediation capable of sharing certain characteristics with the city. In fact, it represents the sum of conventions that affect not only social structures, but also cultural models and building systems, generating *long durée* values, on which the meanings and rules of urban morphology are based.

For Huet, therefore, the new Urban project should recover that dialectic of unity and fragment, of the continuous and the discontinuous, of the identical and the different, found in all existing cities.

The Value of the Street for Urban Architecture

Going back to what Aldo Rossi wrote about Marcel Poéte's research, what makes it possible to evaluate the unity of urban expression through the ages is the value of the street. It allows the city to stay alive through the exchanges that take place in it, with equal importance given to cultural and commercial exchanges. The urban analysis, there-

Bernard Huet, "L'architecture contre la ville," *AMC* 14, (1986): 10–13.

fore, starts firstly from Urban facts, as generator elements of relationships between urban fabrics, and secondly from the classification of the street network: it is the streets, in fact, that contribute to creating a hierarchy of urban spaces. These, moreover, being "elements capable of accelerating the process of urbanisation of a city and characterising the processes of spatial transformation of the territory"¹³, are for this reason counted in the category of primary elements, that is, those catalysts that condition the dynamics of the city. In fact, through them, and from the order in which they are arranged, the Urban fact presents its own particular quality that is mainly given by its insistence in a place, by the performance of a precise action, by its specificity.

Architecture is the final moment of this process and is also what is detectable of the complex structure. Thus, the Urban fact and its architecture represent a work of art.

Although the identification of the street as a primary element must necessarily come from an evaluation of its real value and its peculiar characteristics, the assumption of this category, like architecture, in the list of the main components of the city, sanctions its urban importance and, in so doing, emphasises the relevance and role of its project. In his considerations on urban morphology, the author highlights the role of the urban landscape as a field of investigation and empirical terrain in which the study of forms, spatial structures of the city and their relationships moves.

In this sense Rossi cites the research of Kevin Lynch, who has opened up a field of research capable of systematising the congruence between form, function and image of the city through the analysis of the street and its semantic, structural, historical and social aspects, interpreting it as a question of (public) space. Through and the street, therefore, is possible not only understand the evolutionary dynamics of urban morphology, but the forms of all aspects of urban life, and specifically the deeper phenomena of social life. In this regard, in commenting on the mediating capacity between architecture and the city of the devices of the Urban project, the figure of Bernard Huet is still extremely useful.

For the latter, in fact, public space, and first of all the street, is "the

13 Rossi, L'architettura della città, 44.

generative space of the city. First and foremost, it is the space to be thought of, which then regulated and ordered all constructions. It has an autonomous consistency, primary and prior to architecture"¹⁴. For Huet, the Urban project and its dialectical action between architecture and the city, capable of producing time and continuity, attributes fundamental importance to the space of the street.

Avenue des Champs-Élysées (1664-2022)

The above considerations permit to focus the attention on case study Avenue des Champs-Élysées, with the aim of showing the ways in which new paradigms and renewed practices of design have been able to confront the historical heritage, promoting the recognition and conservation of formal values. The analysis starts from a literature review, and then focuses on the interpretative redrawing as a process of interrogation and interpretation of places, in order to show, in the succession of readings, the characters of formal invariance. In fact, drawing, used as a methodology of analysis and synthesis, is the comparative principle on which the comparison between the two projects is based.

Five temporal stages are considered, of which the first three, treated in the form of a prologue, are designed to bring out the typological and figurative characters of the site in its developments. The first phase starts with André Le Notre's original project of 1664, and, going beyond the 18th century, sees the establishment of the axis as the generative matrix of Parisian urban form. The second, in the mid-nineteenth century, sees the Avenue as an archetypal element of Haussmann's evolution, which, through Adolphe Alphand's project, finds the gradual concentration of fine architecture and the establishment of the place in the imagination of Parisians and the rest of the world. Finally, the third, from the 1930s onwards, denounces a period of crisis, inherent in the emergence of the automobile and the 'mass consumption' of the boulevard, a consequence of a capitalist vision of the city, in some ways still ingrained. The work then focuses on the last two phases: Bernard Huet's 1992 project and Philippe Chiambaretta's 2020 proposal, Reénchanter les Champs-Élysées. The two projects limit their action to

Bernard Huet, "Il progetto urbano e la storia," Rassegna di architettura e di urbanistica 110-111, (2003): 42.

the historical section of the axis, between *Place de la Concorde* and the *Arc de Triomphe*. This fact, as well as the intention to establish a comparison that looks at the character of continuity and innovation of this urban element, determined the choice not to consider the section that represents the continuation of this axis up to the *Arc de la Defense*. This last section, in fact, although today it presents a character of unity with the previous part, it presents a relatively more recent genesis, as well as morphological, scalar and usage characteristics that are different and not entirely comparable with the historical part.

Apology and crisis through three centuries of urban development

The urban history of the *Avenue*, which began in 1616 as a tree-lined path extending from the Louvre to the Tuileries Palace, was entrusted by Louis XIV in 1664 to André Le Notre for the project of its extension beyond the city limits represented by the eastern ramparts.

At the beginning of the eighteenth century, Champs-Elysées appeared as an ambiguous space: neither park nor avenue, neither urban nor rural (Fig.01), marking an open view of the city over the countryside; a great perspective, at first visual, then practical, which determined a direction of expansion for the city.

But, although this layout is the precursor of later urbanisation, for its first period, the site was subject to a strict policy aimed at preserving it from property speculation, prohibiting construction and allowing horticultural and farming activities to continue. This policy was interrupted in the middle of the 18th century, with the creation of *Place Loius XV*, now *Place de la Concorde*. The creation of this passage, coupled with the vast work of levelling the hill of *l'Étoile*, definitively sanctioned the integration of the avenue into the city, increasing the use of its gardens and *folies*, places marked by great urban vitality, so that *Champs-Élysées* could be considered a large urban park.

The beginning of the 19th century was a period of intense building, leading to the extension of the city as far as the *Arc de Triomphe*. Following the hygienic movement, the city changed radically under Napoleon III, and Haussmann and Alphand organised the urban structure by demolishing the dense fabric and laying out the *Grands Boulevards*, of which *Champs-Elysées*, with its order, regularity and airiness, is the archetype, as demonstrated by the radial axes of the *Etoile* (Fig. 02).

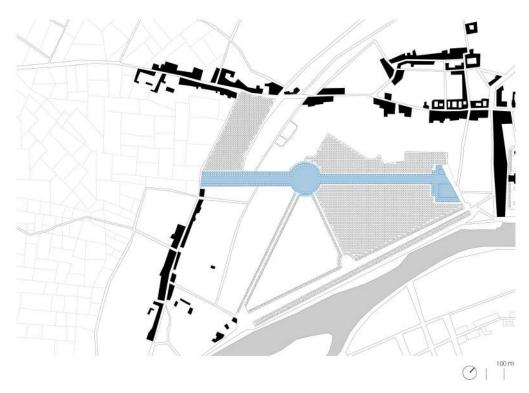


Fig.1 - The Champs-Èlysées in 1750. The avenue, bordered by two continuous tree-lined rows, appears as an axis of potential urban expansion but is not yet affected by the presence of the built, which develops parallel to the north. In fact, it maintains a rural nature and, crossing a first wooded portion, leads to the areas of the productive and open fields. - Source: G.B. Cocco, A. Manca 2022

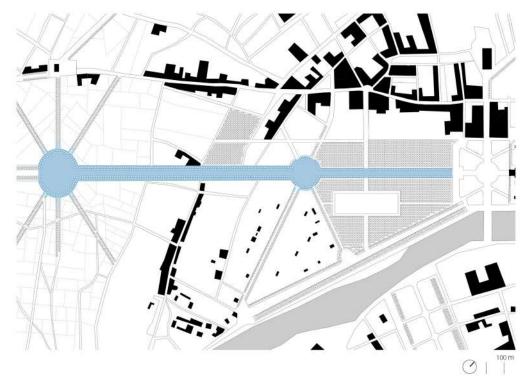


Fig.2 - The Champs-Èlysées in 1850. The entire avenue is developed in its historical layout. It is not yet incorporated into the city, while in the initial part, to the north-east, work begins on the gardens. - Source: G.B. Cocco, A. Manca 2022

But this period was also the period of maximum splendour for the gardens of *Champs-Elysées*, where *the Palais de l'Industrie*, centre of the Universal Exhibition of that year, was built in 1855. In this sense, *Champs-Élysées* gardens represented an area of experimentation and freedom of design compared with other Parisian parks and gardens.

In 1900, a new Universal Exhibition corresponded to the definition of a vast project which intended to relate, both formally and symbolically, to the Avenue a set of emblematic buildings representing the State (*Tuilleries*), the Government (*Parlement*), the Church (*Madeleine*), and the Army (*Ètoile*). A new axis intersects this one, incorporating, through the same logic, the representation of the Republic (*Èlysée*), art and industry (*Grand Palais and Petit Palais*) and Defence (*Invalides*).

In the early 20th century, with the mobility revolution, Champs-Elysées saw a progressive increase in car traffic. The second line of trees was cut down and parking spaces were authorised on the opposite side of the avenues, which led to a loss of perspective towards the *Arc de Triomphe* (Fig. 03). As Jean-Loius Cohen explains¹⁵, between the beginning of the 19th century and the Second World War, *Champs-Élysées* ceased to be the place of residence and leisure of the *elite* to become an architectural and urban scene embracing the values of the automobile, industry, media, cinema and advertising, the centre of a new Paris.

The 1991 competition and Bernard Huet's project

In spring 1991, in line with the major urban renewal projects for western Paris, an international competition¹⁶ was launched for the redevelopment of the section of avenue between the *Etoile* and the *Rond-point* of *Champs Elysées* (Fig. 04).

The call for proposals, set out three measures of intervention. The first concerns the redevelopment of the public space, through the general reduction of traffic and parking on the opposite side of the avenues, the arrangement of pedestrian walkways, the recovery of the old

Jean-Loius Cohen, "Les Champ de la Modernité," in *Champs Élisées*. *Histoire & Perspectives*, ed. PCA-STREAM (Paris : Pavillon de l'Arsenal, 2020), 85-95.

The competition was by invitation. In addition to Bernard Huet, (winner), participants included Alexandre Chemetoff, Alain Marguerit, André Schuch with Christophe Lukasiewicz and Serge Botello, Vincent Wormser.

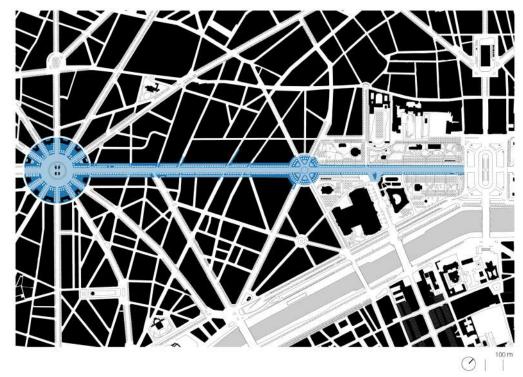


Fig.3 - The Champs-Èlysées in 1950. The avenue is totally incorporated into the built fabric. The conformation that will persist until the present day is clearly visible: the north-eastern part is occupied by the gardens and the architecture dispersed in them, while the section from the *Rond-point* of *Champs Elysées* to the *Etoile* has a totally urban character. - Source: G.B. Cocco, A. Manca 2022

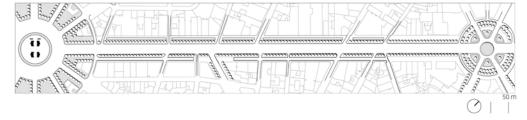


Fig.4 - The section of avenue between the Etoile and the Rond-point of the Champs Elysées before the 1991 competition. The drawing shows the presence of only one tree-lined row, and a very small section of pedestrian space, located between the driveway and the *contre-allées*, passages close to the buildings dedicated to car parking. Moreover, the relationship between the two sides of the avenue is totally absent. - Source: G.B. Cocco, A. Manca 2022

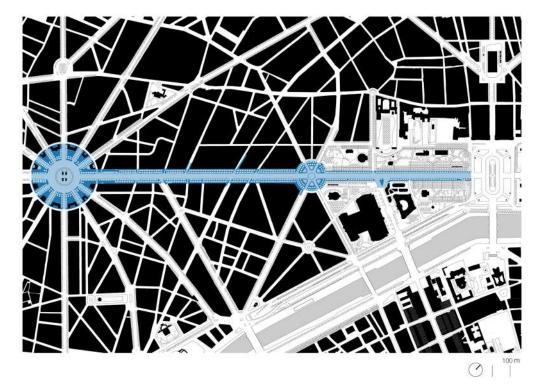


Fig.5 The current configuration of the Champs-Elysées, the result of Bernard Huet's 1992 project. Huet operates exclusively in the section between the *Rond-point* of *Champs Elysées* and the *Etoile*, with the intention of re-establishing the unity of this section of the avenue, the historical perspective and restoring space for pedestrians. – Source: G.B. Cocco, A. Manca 2022)

section with the replanting of a new line of trees and the reorganisation of street furniture. The second is aimed at reconfiguring the advertising and sales system, while the third is aimed at regulating commercial activities.

Bernard Huet's project (Fig. 05) restores clarity and importance to this urban sign, taking up Le Notre's thought and projecting it into the present.

The author has proposed precise rules, through a design that composes and orders the different parts, with the aim of freeing the axis from superfetations – to recover the original perspective– and recovering the historical compositional elements, reflecting on the current uses of space.

The design of the new flooring emphasises these different uses of the public space. It consists of a complex interplay of variations and rhythms, integrating in the composition the rigid geometry of the alignments with the flexibility needed to accommodate the irregularities caused by the presence of non-removable elements. This light grey granite carpet alternated with dark grey inserts, with longitudinal and transversal lines, reinforces visual continuity in both longitudinal and transversal directions, constituting a 'diversity of colours suitable for a prestigious space and a repetitive system that reinforces the unity and continuity of the composition and allows for multiple visual order'¹⁷.

The furniture is inserted in the space between the two tree lines, freeing up the areas near the buildings. The avenue therefore appears tripartite, with a space near the urban fronts, one between the two trees which includes the accesses to the underground car parks, and one near the road (Fig. 06).

The 2020 "Reénchanter les Champs-Élysées" project

At the beginning of 2020, the mayor of Paris Anne Hidalgo announced a new project for the avenue, presented publicly at *Pavillon de l'Arsenal* in February 2020 in an exhibition entitled *Champs-Élysées*, *Histoire* & *Perspectives*¹⁸, and carried out by the team composed of architect Philippe

¹⁷ Patrick Pognant, "Le sauvetage des Champ Elysées," *Paris Projet* 30-3, (1993), 82.

PCA – STREAM, Champs Élisées. Histoire & Perspectives, (Paris:

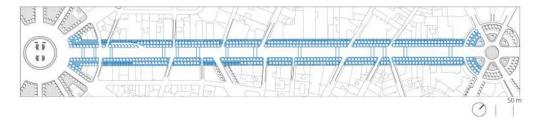


Fig.6 - The section of the avenue between the Etoile and the Rond-point on the Champs Elysées in Bernard Huet's project of 1992. The drawing shows how Huet's design reconstitutes the double tree-lined avenue in accordance with the historical configuration of the avenue and eliminates the contre-allées by creating a wider and continuous pedestrian walkway. In the western part of the section, access to the new underground parking spaces is also visible. The paving emphasises the longitudinality of the axis through the sequence of transversal geometries; an aspect that also constitutes the unity between the two sides when crossing the driveway section. The introduction of the new paving geometries becomes the main expressive feature; they tell of the rootedness in history and improve the spatial quality. - Source: G.B. Cocco, A. Manca 2022

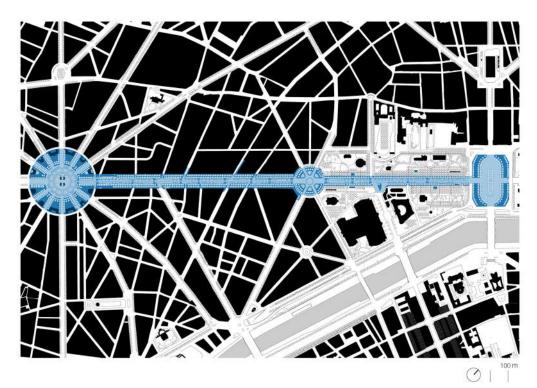


Fig.7 - The configuration of the Champs-Elysées according to the 2020 project. Chiambaretta operates in the entire historic segment of the Champs Elysées, acting in accordance with Huet's quest for the unity of the avenue and increased space for pedestrians. The project also infiltrates the spaces of the gardens, increasing the spatial quality and possibilities of use. - Source: G.B. Cocco, A. Manca 2022

Chiambaretta, the STREAM research group and the *Comité Champs-Élysées* .

The project is based on two assumptions: to re-establish the link between Parisians and the avenue, which has gradually been dissolved by traffic, pollution, excessive consumerism and over-tourism, and to work from an ecological perspective by acting on five urban layers: nature, mobility, uses, the built environment and infrastructure.

The project (Fig. 07) interprets the avenue as a collective space to experiment with the development of a sustainable, desirable and inclusive city, focusing on four main strategic priorities: to reduce the impact of urban mobility, to rethink nature as an ecosystem, to identify new possible uses and to exploit, with a smart approach, the use of data to measure and regulate environmental, spatial and urban vitality qualities.

The concept of urban metabolism, which, in agreement with the horizons of ecological transition, represents the general interpretative key of the project, introduces a new urban thinking, scientific and interdisciplinary, sensorial and analytical, to face the contemporary city in all its systemic complexity, strengthening the rooting in history and approaching the local dimension with the wider issues of the global urban condition. The metabolic idea expresses a specific process of living in the way to manage urban development, through a set of complex approaches and towards a changing, integral and open city, whose character of unpredictability constitutes the priority aspect of contemporary architectural practice. The evolving relationship that characterises the horizons of the project, while moving from an apparently new perspective, seeks a direct derivation with the past in terms of form and meaning, promoting a continuity of Urban facts. In fact, the project identifies and operates in the two large portions of this axis, between l'Etoile and Place de la Concorde; the first, on the western section, is a hyperplace, compromised by road traffic and characterised by a high density of use; the second, on the eastern section, is a hypervoid characterised by gardens and parks as far as the Seine. In the design intent, the first must be subdued, re-establishing its spatial and compositional

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Pavillon de l'Arsenal, 20	20).	

unity, while the second must be revitalised and re-enchanted, valorising pre-existing architecture, preserving the established spatial layout and re-establishing urban meanings and historically present uses.

The action on the section located between the *Rond-point* on *Champs-Élysées* and the *Arc de Triomphe* includes the reduction of car traffic by narrowing the roadways, with the consequent restitution of space to pedestrians, the reinforcement of the *promenade* and the rhythmic creation of new points for loisir and the realisation of green rooms which translate into the design the prospect of increasing urban greenery. The *Étoile* crossroads is reinvented, becoming a large circular square, and from it, the whole space of the avenue is perceptually unified and increased, both longitudinally and transversally. In the gardens and harbour, currently underused, the extraordinary potential in terms of quality, quantity of green spaces and biodiversity is reinforced to encourage both social and individual activities (Fig. 08)

Conclusions

The theoretical assumptions, which led to the hypothesis of coherence between the paradigms presented at the beginning, are reflected in the description of the case study presented. Its critical analysis shows the ability of the project to interpret the needs of the present time through its character of continuity, which is always clearly visible in the permanence of the typological and morphological invariants. In fact, by accepting new forms and meanings, they express characteristics of resistance to long-term processes of modification. Circumscribing the reading to the last two phases, it is evident how the recognition and acceptance of new instances attests to the guiding value of the architecture-city paradigm and of urban thought, even in the emergence of new needs, different fields of action and in the affirmation of new paradigms. The full recognition of this aspect, clearly visible also in the comparison between the interpretative drawings (Fig. 09), is accompanied by the identification of some complementary reflections.

Firstly, it emerges how the two paradigms presented can be traced back to the same vitalist metaphor, relating to the theory of permanence set out by Poéte and taken up by Rossi, and which is also found in the discourse underlying urban metabolism.

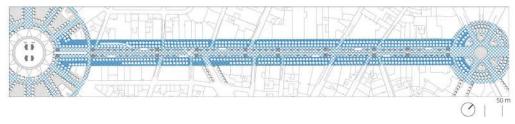


Fig.8 - The section of the avenue between the Etoile and the Rond-point on the Champs Elysées according to the 2020 project. The drawing shows how in Chiamabaretta's project the pedestrian space is further increased, while the unity of the axis in its two directions is not altered. The replacement of furniture elements is not contemplated, nor is the reshaping of the descent to the parking spaces, nor the relationship between the street and the built façades. The geometric design of the paving is modified, which, while preserving the unity of perception, loses the complex refinement of the previous solution. - Source: G.B. Cocco, A. Manca 2022

Although the terms it addresses are apparently not the same, a more careful reading reveals the real essence of this view: the idea that in the constant, imponderable evolution of the city it is necessary to focus attention on its invariant elements, the only ones capable of measuring and guiding its development through design. In this, a primary role is certainly associated with the forms of the built environment. This shows the great relevance of Huet's teaching, according to which "the first quality of an Urban project is based on the evidence and simplicity of the solutions it offers"19. Another common aspect is the constitutive vision of the Urban project, which identifies the living and working component of the community as the first promoter and first user of evolution. In this sense, the necessary relationship with elements that, through their permanence, are able to represent the soul of the city and whose existence, even undergoing a crisis, is nevertheless wedged in the urban memory, and only apparently cancelled. This character of architecture's resistance can be seen in the two most thoroughly analysed phases of the case study. Huet's project shows how the architect was able to interpret and bring to light a symbolic place in Parisian urban history, reinforcing its typological and formal characteristics and restoring the dignity of its original use as a promenade to the detriment of the uses induced by modernity. At the same time, Chiambaretta's recent proposal, showing an increased interest in the human scale and the preservation of the urban environment, not only enhances the legacy of Huet's intervention and a connection with the whole urban palimpsest, but seeks to restore the original character of Champs-Elysées as a great urban green axis. The rethinking of Champs-Elysées thus assumes an inspirational role for new models of urban design.

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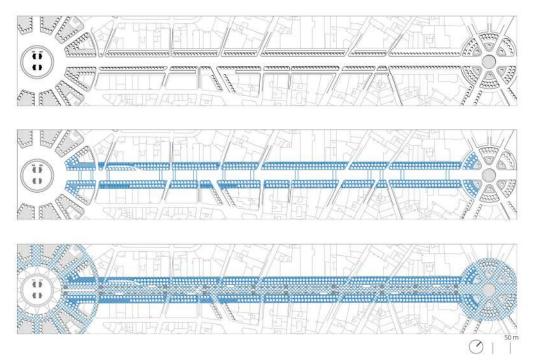


Fig.9 - Comparison between the interpretative drawings of the phases analyzed. It is visible how the intentions of restoring the historical character of the axis and re-establishing its formal and spatial relations have also pursued by Chiambaretta. - Source: G.B. Cocco, A. Manca 2022

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From tramway-line to park – mapping the process of an urban transformation

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Abstract

Aim of the research is to analyse the different dynamics which put into effect the transformation process of an abandoned green linear space into an urban park in the city of Turin, Italy. The Precollinear Park has been developed by a non-profit organisation in a portion of a former tramway line area exactly positioned in the in-between belt dividing two different administrative districts. Therefore, a normative and physical vacancy opened the possibility for the organisation to temporarily take the management of the area, making the project being recognised through the institution of a public-private partnership. The project has been carried out by a private intervention, initiated by a non-profit actor, which has been using the operational and financial support of the local community, both public and private.

On the review of this specific process, the paper examines the continuous aggregations, variations and deviations which made the project happen by presenting the different human and non-human actors which took part in it, highlighting the combination among different elements and their effects.

What this case study shows can be considered as twofold: from one hand, it depicts the diagrammatic course of the different actions which made the project possible, and investigates its peculiar process; from the other, it questions the role of non-institutionalised neither professional actors, which without any official elective nor technical-administrative mandate, manage to intervene in urban spaces and transform the city. Ethnographic methods applied to the study of architectural projects help fostering the conversation about the externalisation of public services to private actors in cities urban developments and the role a topic like city branding may have in this.

Keywords

Temporal urban transformations, public-private intervention, city branding.

Introduction

The "Precollinear Park" is a project started in June 2020 as a temporary reuse of a dismissed tramway area in Turin and is potentially considered to become even permanent. It has been designed and managed by the not-for-profit cultural organisation Torinostratosferica and consist in a 700-meter-long former abandoned tramway currently converted to a linear Park. This green and pedestrian boulevard hosts several cultural and social activities in a designed area furnished with benches and tables, a small urban garden and an exhibition space. Having just an architect in a staff of roughly eight people, comprised mainly of graphic designers and communication managers, the association generally deals with the organisation of cultural events focused on urban themes, open to a broader and made-by-non-experts audience. Before receiving the permit to manage the park, their curriculum presented no previous experiences of any physical intervention neither in the public nor in private spaces. Thus, previous to 2020, the analysed association would have not been considered as an ordinary actor in the urban development of cities in general nor in Turin in specific. Nevertheless, it has managed to sneak into what can be considered an administrative and physical vacancy of the area by exploiting peculiar contingencies which will later be presented in the paper. By unpacking the unfolding phases of the process that brough to the realisation of this temporal intervention, the research shows specific dynamics that can help framing general considerations about urban transformations and adaptations to temporal needs in the use of city streets.

Therefore, the study presented can be considered as a site-specific focus on a peculiar case, which, explained through its unfolding process of place making, shows how public-private partnerships can succeed for the development and the maintenance of dismissed public areas in Italian cities. It can be considered as a specific zoom that highlights development mechanisms of allowance and refusal in the ordinary management of public spaces and streets in particular.

The pragmatic observation used to analyse the diachronic realisation of the project finds its methodological references in specific ethnographical studies applied to the observation of architectural practices and has applied direct observation, qualitative interviews and an in-depth study of the organisation's archive in order to study the project; it mainly takes the works of Californian architectural theorist Dana Cuff and sociologist Albena Yaneva as references¹²³. Thus, it takes the study of a selected particular case study as a "specific form of the generic" in order to unfold how specific urban practices and their *modi operandi* could possibly be integrated in urban processes. Such a working method positions itself with an ethnographic interest in the knowledge of practices, acquired in their direct observation, asking indeed how objects are *handled in practice*⁵.

Starting form a pragmatical position, the paper will briefly introduce the theoretical issues the research aims to tackle; then, an introduction of the specific research methods applied will be given, followed by an in-depth explanation of the results of the ethnographical observations. A conclusive reflection closes the paper aiming at opening up the conversation to some generalizable issues concerning public spaces and city streets.

Urban transformation of cities and public private partnerships

As British geographer Erik Swyngedouw clearly unfolds in the first chapter of his book "Promises of the Political", over the past few decades, a generalisable tendency of emergence of formal and informal "post democratic" institutional arrangements and figures of governance has influenced the political in general. According to the author, this has brought to a growing involvement of both private economic actors and civil society in governing and managing what was previously provided by the national or local state⁶. Once looking at the urban development management of western European cities, such a radical

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Annemarie Mol. The body multiple. Duke University Press, 2003.

⁶ Erik Swyngedouw. *Promises of the political: Insurgent cities in a post-political environment.* MIT Press, 2018.

shift becomes particularly evident. This neoliberal transformation has resulted in an overturning of distributional policies towards more market-oriented solutions and services, where cities and their municipal administrations, traditionally main promoters of urban development projects, have drastically lost their traditional leading roles7. Therefore, new forms of governance have emerged, consequently enlarging the spectrum of formal and informal actors involved in urban developments and externalising public services. Once looking at the development and management of city streets and the general maintenance of public spaces, this is particularly crucial to consider as a background field of action. The presented case can be considered as a good exploration to deepen considerations about city branding and city marketing. A recent publication of a study about city branding Italian urban geographer Alberto Vanolo highlights an interesting paradox in the consideration of such a growing phenomenon, which can be considered as generally neglected by critical urban scholars but still has a larger than expected attention and follow-up in municipal administration offices. Indeed, he pinpoints, that even though the topic of city branding has generally been considered as "the practice of selling cities" in critical urban theory it has seen a greater debate in academic departments mainly relating to business and marketing studies. Nevertheless, these distinct academic communities poorly engage in conversations with each other's. Moreover, in the Italian context, policy makers are still "greatly attracted by those terms and ideas" and therefore meaningful reflections across the fields are much needed8.

By looking at the unfolding process of transformation of the "Precollinear Park" both the shifting roles of actors become more evident, as the importance of city branding and city marketing narratives in public administration offices.

According to Italian urban scholar Gabriele Pasqui, cities are characterised by the forces that cross them and create *dynamics balances* which

⁷ Bas Waterhout, Frank Othengrafen, Oliver Sykes. Neoliberalization processes and spatial planning in France, Germany, and the Netherlands: An exploration. *Planning Practice & Research*, 28(1), 2013, 141–159.

⁸ Alberto Vanolo. Cities are not products. *Tijdschrift voor economische en sociale geografie*, 2020, 111.1: 10–17.

constitute their inner *radical pluralism of practices*⁹. The presented work will indeed map and present these sometimes–contrasting forces, how they got in relation one another, their effects in the given case of the Turinese green boulevard.

As it has been stated in the introduction, the research will adopt a pragmatic position and will look straightforwardly at the diachronic process that made the realisation of the placemaking project happen.

The Precollinear Park: a genesis

Torinostratosferica is a not-for-profit organisation active in the city of Turin since 2016. This cultural association has been born as spin-off project that emerged from a collaboration of 2011 between the communication and graphic design agency Bellissimo, in charge of fostering the branding of Turin, and the city municipality. By actively contributing to the editing and the design of the third strategic plan one the city of Turin¹⁰, the design studio and its staff rapidly got convinced about the urgency of bringing communication and marketing modi operandi into the city strategies. Fostered by the popular reading of Richard Florida about the important and emergent role of the creative class characterized by its "Talent, Tolerance and Technology" in cities developments¹¹, these thoughts and experiences made rapidly grow the idea of founding an organisation particularly dealing with urban issues in a non institutionalised way in the founder and creative director Luca Ballarini and his collaborators. Thus, the brand led to the foundation of the not-for-profit organisation in 2016. This, started to deal at first with the "participative dimension to the construction of the city image in an alternative way" by proposing an alternative to institutionalised decisions-making-processes and its bureaucratic mechanisms and claiming to be in charge of sharing urban knowledge to a non-specialised public. In the first four years of activity, Torinostratosferica had started to structure its works and build its network mainly dealing with an unusual and non-conventional approach to common paradigm used in

Gabriele Pasqui. *La città*, *i saperi*, *le pratiche*. Donzelli editore, 2018.
Torino Strategica. *Metropolitan Turin* 2025. 2015, Retrieved from http://www.torinostrategica.it/wp-content/uploads/2015/04/
Metropolitan Turin 2025 Summary web.pdf.

¹¹ Richard Florida. *The rise of the creative class.* Hachette UK, 2014.

participatory design and applied to city branding and city marketing¹². Until 2020, as a cultural association, it had organised an annual international festival "Utopian Hours", thought as an event to talk about *city making* with a non-specialised neither sectorial public and several gatherings moments of *collective territorial branding*, so called "visioning sessions", where it was asked to participants to imagine a Turin at its best.

How is it possible that a non-ordinary actor, apparently not directly involved nor interested in the physical development of the city, neither in the city's urban policy discourses, has managed to become what could be defined as a place-making agency? Is there any kind of relationship that can be deduced between city branding and city marketing and so called "place-making" construction narratives? Looking at six years later, during the summer of 2020 when the Precollinear Park has been realized, are some patterns of this peculiar entanglement between city municipalities and strategies of branding and marketing¹³ still visible? Moreover, can these be considered as a trigger from where the public and civic engagement of Torinostratosferica agency has started?

Ethnographic methods to study architectural projects

In order to unravel the diachronic process that made the project of the Precollinear Park possible, it has been chosen to carry out qualitative research applying direct and indirect observation of the work of Torinostratosferica and the different actors that they have encountered. In the period between November 2020 and November 2021 fourteen interviews in order to reach the different actors involved. Following the classification of the dutch social scientist Gerben Moerman¹⁴, it has been chosen to systematise these interviews as open conversations in order to give everyone the possibility to tell, from his/her specific per-

Luca Ballarini, Edoardo Bergamin, Dario Consoli. Torinostratosferica: un progetto di city imaging.In Monica Gilli e Segio Bernardino Scamuzzi, Pianificare il Turismo. Innovazione, sostenibilità e buone pratiche, 2020.

Alberto Vanolo. Cities are not products. *Tijdschrift voor economische en sociale geografie*, 2020, 111.1: 10-17.

Gerben Moerman. *Typologies of interviews* [Video file], 2016. Retrieved from https://www.youtube.com/watch?v=oM1acdBAkao.

spective, issues and aims related to the specific case study. Simultaneously, an attentive study of the association's archive and the different documentations produced during the process have been analysed and, together with the interviews transcripts, consist of the following research and paper the main sources of references. The application of ethnographic methods, which have been crucial to structure the ethnographic report of the paper, which consist in its core, have as references general ethnographic studies as Clifford Geertz "Deep play: notes on the Balinese cockfight" and the study of Annemarie Mol "the body multiple" 16.

Albena Yaneva's ethnographic study of OMA design practice has been pivotal to the recents raising interest in ethnographic methods to the study of design studios trajectories. Indeed, her work, by taking methods and approaches from design theory, political philosophy and cognitive anthropology, opens "buildings to the experience, to the course of events that make and consume architecture"¹⁷.

Prior reference but still crucial, similarly applying an ethnographic pragmatism to the study of architecture with the aim of researching which are the professional activities of architects and how they are performed is Dana Cuff "Architecture: the story of practice" Such a method allows to trace the inner logic of the design project and on what architects actually do, by looking at everyday routines, individual gestures and collective interactions. Thus, it prioritize the actions and not the discourses and narratives and enters into a conversation with the design practice ¹⁹²⁰.

Unfolding the process

¹⁵ Clifford Geertz. Deep play. Rethinking Popular Culture: Contemporary Perspectives in Cultural Studies. Ed. Chandra Mukerji and Michael Schudson. Berkeley and Los Angeles: U of California P, 1991, 239-277.

Annemarie Mol. *The body multiple*. Duke University Press, 2003.

¹⁷ Albena Yaneva. *Mapping controversies in architecture.* Routledge, 2016.

Dana Cuff. Architecture: the story of practice. Mit Press, 1992.

Bruno Latour and Albena Yaneva. *Give Me A Gun And I Will Make All Buildings Move: An Ant's View Of Architecture.* Architectural Theories of the Environment: Posthuman Territory, London: Routledge, 2012, 107–14.

Albena Yaneva. Five ways to make architecture political: An introduction to the politics of design practice. Bloomsbury Publishing, 2017.

In June 2020, the cultural association decided to make one of the "boutades" of the visioning sessions come true by starting a process of trial and error in trying to realise the so-called "Precollinear Park". The project found its available contingencies in part of the abandoned tramway path of tram number 3, serving the north-east area of the city from 1989 until 2013. Figure 01 shows its terminal, Piazza Hermada (1) and the roadway of Corso Gabetti (2) further down to the river Po (3) towards Regina Margherita Bridge (4). Notwithstanding the almost permanent abandonment over the last decennium, still different municipal projects of letting the tram run again are made as political promises²¹. Moreover, the yellow line on the figure highlights the demarcation border between two different administrative districts of the city, the seventh and the eight²².

From this given information, we can pinpoint three different levels of vacancies and delimitate some previous conditions of action:

- a physical vacancy is given by the abandonment of the tramway. Since 2013 indeed, the tram had been active again only for a few months between 2015 and 2017, leaving for the remaining time urban wilderness space and the time to slowly take appropriation of the dismissed area;
- an administrative vacancy due to being on the border between two different administrative districts, resulting in none taking jurisdictional responsibility on the area itself.
- 3. a planning vacancy. As several promises of infrastructure investments show, within the city of Turin there is still a certain planning idea of tram making line 3 work again (metti reference regolamento 389). Such an uncertain future, made any structured design for the area hardly possible.

Different interviews with several employees working at Torinostratosferica show how the space appropriation process came from peculiar

²¹ Many articles can be found in Italian. For further information look at https://www.torinoggi.it/2020/07/22/leggi-notizia/argomenti/attualita-8/articolo/corso-gabetti-parco-lineare-ma-solo-per-poco-il-comune-promette-il-ritorno-del-tram.html or http://www.comune.torino.it/cittagora/altre-notizie/la-rambla-di-corso-gabetti-prima-che-arrivi-il-tram.html

²² For an in depth overview of Turinese administrative boundaries look at http://www.comune.torino.it/decentr/



Fig.1 – Area of the intervention. Source: Gribling, 2022

contingencies combined with the shrewdness and the ability to sneak into the spaces left by the presented vacancies. "We took the project by conquer," "the main idea was: let's obtain a part of the city and let's start to take care of it, a project of learning by doing the iter had been totally improvised" "the administrative issues were like a jungle...therefore, we have had the need to make our way through them using a machete" "we always informed the municipality of what we were doing but we have never asked for official permission" are some of the collected sentences which characterise the summary of the experience according to whom had taken part in it, after some months. Indeed, the idea "existed already" since it came as a result of one of the proposal of the visioning sessions²³ and how to let unfold the different phases came consequently thereafter. A crossover reconstruction of what the design and realisation process has been shows how the first step of the informal request for the development of the project took place on may the 28th 2020. On the 20th of June, twenty days after but before having received any kind of official concession, the cultural organisation decided to organise an unofficial event to announce the "next opening of the first Precollinear Park of Turin"; on the 7th of August 2021 the city of Turin had publicly approved the "temporal and free concession" of the area to the cultural association Torinostratosferica for the realisation of the Precollinear Park Project in the area between Piazza Hermana and Corso Gabetti.

The several vacancies of the area had favourable conditions that made the project feasible for a non-experienced collective and realisable in a short period of time. Besides, the specific design and management *iter* can be considered as going opposite to a tender procedure opened by public administrations for the delegation of some public services. Indeed, there has never been a call of applications, or a competition for the development of the specific linear and green boulevard. Torinostratosferica started at first to claim that it would have taken over the abandoned space, making public declarations that they would transform the space during two open and informal events. Thus, a spe-

Luca Ballarini, Edoardo Bergamin, Dario Consoli. Torinostratosferica: un progetto di city imaging.In Monica Gilli e Segio Bernardino Scamuzzi, Pianificare il Turismo. Innovazione, sostenibilità e buone pratiche, 2020.

cific declaration of intention came at first. Thereafter, some administrative employees of the municipality of Turin, sympathisers of the project idea, privately suggested how to apply for receiving the temporary concession of the space. Among more than 400 regulations of the city of Turin, the n°389 resulted perfectly suitable for the needs of the project. As it has been previously explained the area was vacant, and the project idea was considered to be successful in different circles of people working for the municipality of Turin. Moreover, as several interviews have shown, the idea found a general positive reaction among a broad spectrum of both citizens and civic servant's due to its position in an easily manageable neighbourhood, its feasibility and temporariness. "The area was abandoned and therefore was downgraded in its physical terms [...] tall grass and garbage around [...] thus from the commission for the public green to the one in charge of the infrastructure everyone would have been in favour of the project".

The regulation n° 389 approved by the city of Turin in 21st of October 2019 is an incentive to private parties to participate to "contrast urban degradation and to foster urban safety" by proposing any kind of physical intervention in public space that would not exceed sponsorships major of € 40.000 euro and takes over to the association full responsibility of the management and the maintenance of the area. It is defined as a strengthening of distributed public-private partnerships and it basically works as a delegation of the maintenance of public spaces to private parties. As several interviews have shown, the project has been developed in three different phases between June and October 2020 aiming at both building the physical interventions and the general reputation and agreement among the neighbourhoods. The branding strategy of the whole area went along with its material development in an incremental and step by step process of claiming space. Figures 02 and 03 show how the former tram platforms had been cleaned up, crosswalks had been painted new, benches and tables had been installed together with the designation of an exhibition space and a small urban garden, and with a dog area; moreover, on the bridge itself a yellow container had been placed to physically branding the place itself. A team of five people of the staff were constantly involved supported by a growing team of volunteers.



Fig.2 – Benches in Corso Gabetti. Source: Federico Masini. *Pictures of Precollinear Park*, gently provided to the author by Torinostratosferica, 2021



Fig.3 Regenerated Tram stop in Piazza Hermada. Source: Federico Masini. *Pictures of Precollinear Park*, gently provided to the author by Torinostratosferica, 2021

From one hand, this spatialisation of city branding has given to Torinostratosferica the possibility to enter a conversation with city's main actors and stakeholders, from the other the state of abandonment of the area and the inability of public authorities to take care of it made the involvement into urban development management of this particular actor possible.

From a public space management perspective, is particularly interesting to highlight how the space, after its regeneration, drastically saw an increase in its use. Indeed from being abandoned and dismissed the cleaning and making over of the area made it accessibile again. "Suddenly students felt comfortable to meet after school in the area, and dog owners felt safe to let their pets walk [...] public space was accessible again".

Public services and supplies, as street illumination of the whole area and the provision of free water, interrupted since the tram had stopped to run, started to be provided again. In particular, SMAT group, the private enterprise in charge of providing and managing the 45% water goods in the metropolitan area of Turin, offered to Torinostratosferica to plug in drinkable water for free; while the joint stock company Iren, providing electricity to the city, helped the association to illuminate the park again²⁴. This *exempla* of public private interventions, can be considered as non-ordinary for their process of intervention and realization. Indeed both companies offered to provide the services after having seen the "successful management and strategies of the Park". The interventions can thus be considered as effects of the specific position acquired through the realization of the place–making project.

Even in these considerations, the pragmatical standpoint of the research looks at how the objects are handled and then, from the proposed observation reflects.

By highlighting some crucial nodes emerged from the ethnographical enquiry, the next session will try to delineate some general reflections and criticalities that could make possible to relate such a specific case to the broader context of management of public urban spaces in general and streets in particular.

Information have been taken from na interview with Luca Ballarini and Eugenio Dragoni held in June 2022.

Conclusions

As the research questions have presented, the paper aimed at fostering the conversation about city streets and public spaces in general by highlighting issues of externalisation of public services and city branding in administrative offices by looking at them through an ethnographical exploration. Indeed, the presented case were a practical observation of the phenomena has been applied, seem to confirm the given hypothesis. The Precollinear Park can be considered as an exemplar of how much rhetoric of city branding can be appealing to city policy makers which, has it has been shown, partly approved the project also to the reputation Torinostratosferica had as a branding and communication association. The institution the public-private partnership has been made possible by the ability of the association to sneak in to ordinary development process taking advantage of specific circumstances given by the presented vacancies. Having presented the specific dynamics, more generalizable reflections about the process of externalisation of public services work in practice can follow. Both considerations can be applied to the particular case study but to also trigger the conversation about the commodification of public services and infrastructure and seem urgent in the general debate about city streets and their unfolding processes of development and management.

Particularly interesting to notice for further considerations about the management of this kind of positive processes is the combination of the spontaneity of abruptly interventions of the association and the positive and the welcoming reactions of the administrative institution. What can be defined as a continuous process of negotiation between the two, shows how this kind of positive processes could suggest some general reflections about possible strategies. A broader research about these processes could end up in proposing a tool kit of possible moves in order to foster the welcoming of non-ordinary actors in urban development processes.

Around and about motorway nodes: Infrastructures and crossed territories intensified bonds

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Abstract

Conceived for linking towns, cities, regions and counties in the fastest way, motorways have a short story compared to roads and streets that contribute to shaping territories and fabrics over centuries. Nevertheless, the study of the motorways can be highly fruitful if referred not only to its technical dimension but also to the spatial one, especially to the relation between route and crossed territories. Motorways can be a fascinating lens for studying territories and their evolution over time in the last century, both from the lanes toward the surrounding areas and the other way around. However, motorways have an unusual relationship with time since their layout persists while their components are frequently replaced due to maintenance practices. At the same time, the interest for the motorways also lies in enhancing the relationship between infrastructure and crossed territories, mainly by acting on nodes such as tollbooth, service areas, and stations. These spaces that link the motorway to its surrounding areas can be the object of design experimentation, aiming to promote motorway permeability. In territories such as the Italian one, motorway layout is often tangent to valuable architectures and landscapes that could be reached thanks to specific rest areas and pedestrian paths. At the same time, nodes development can offer the possibility of interconnecting different mobility systems, paying attention to environmental sustainability.

Keywords

motorways, crossed territories, nodes, permeability, sustainability

Conceived for linking towns, cities, regions, and counties in the fastest way, motorways have a short story compared to roads and streets that contribute to shaping territories and fabrics over centuries. In Italy "the motorway Milan-Lakes (84 km) was completed in 1925, the Milan-Bergamo (50 km) in 1927, the Rome-Ostia (20 km) in 1928, the Naples-Pompeii (23 km) in 1929, the Bergamo-Brescia (48 km) in 1931, the Milan-Turin (127 km) in 1932, the Firenze-Mare (81 km) and the Padua-Mestre (25 km) in 1933". It will be necessary to wait until 1956 for the construction of the *Autostrada del Sole* to start: it will be completed in October 19643.

Nevertheless, motorway⁴ studies can be highly fruitful if they do not refer just to the technical dimension but are extended to the spatial one, especially to the relation between motorway layout and crossed territories. Highways and motorways contributed substantially to the development of the territories by increasing mobility and accessibility. At the same time, precisely for this reason, they represent a privileged lens for observing territories and their evolution over time⁵. The importance of motorways as a driving force for development, as tools for understanding territories transformation, and in terms of impact on our daily life, is still present. "Bridges, interchanges, motorways, airports: they govern the functioning of the world, of its flows, they shape it".6

The first toll motorway in the world is Italian: the *Milano-Laghi*. Its first section was opened to traffic on 21st September 1924.

² Colafranceschi, Simone. *Autogrill. Una storia italiana* (Bologna: il Mulino, 2007), 20.

³ The Autostrada del Sole was inaugurated on the 4th of October 1964.

⁴ Bortolotti, Lando, "Origini e primordi della rete autostradale in Italia, 1923–1933." Storia Urbana (1992): 35–69; Greco, Laura. Architetture Autostradali in Italia: progetto e costruzione negli edifici per l'assistenza ai viaggiatori (Roma: Gangemi, 2010).

⁵ Ferlenga, Alberto. "Tassonomia autostradale." *Casabella 6*70 (1999): 58-63; Ferlenga, Alberto, Marco Biraghi and Benno Albrecht, eds. *L'architettura del Mondo. Infrastrutture, mobilità, nuovi paesaggi* (Bologna: La Triennale di Milano - Editrice Compositori, 2012); Ferlenga, Alberto. "Post-Tassonomia autostradale." In *Mi-Bg 49 km visti dall'autostrada*, edited by Andrea Gritti (Soveria Mannelli: Rubettino editore, 2015), 23-29.

⁶ Ferlenga, Alberto, Marco Biraghi and Benno Albrecht, eds. L'architettura del Mondo. Infrastrutture, mobilità, nuovi paesaggi (Bologna: La Triennale di Milano - Editrice Compositori, 2012).

For all these reasons, motorways can be a fascinating lens for studying territories and their evolution over time in the last century, both from the lanes toward the surrounding areas and the other way around. However, they have an unusual relationship with time since their layout persists while their components are frequently replaced due to maintenance practices.⁷

Facing the need to redesign mobility patterns compatible with the reduction of polluting emissions and the transition to sustainable forms of energy supply, motorways could experience a new season of protagonism after the one-second post-war period that corresponded with the economic boom. This would represent an opportunity to rethink some relevant links that escaped from that first glorious season: relationship with the surrounding and its enhancement, with key elements, intermodality. In this perspective, nodes can play a crucial role in experimenting with innovative solutions linked to the energy transition aimed both at vehicles and passengers.

In recent years, focusing on the architecture of the infrastructures, some critical studies have concentrated on this subject and, mainly, on the evolution of the Italian motorways' construction, in which important architects and engineers have been involved, contributing to the definition of original design solutions. The studies about motorway architectures have not been followed in the Italian context by similar design experimentations, except on rare occasions. For this reason, the opportunity to interpret the complex issues related to the evolution of transport, environmental awareness, and new needs of users has long been lost.

The exhibition "Mi-Bg 49 km Seen from the Motorway" - promoted

⁷ Gritti, Andrea, Marco Voltini and Claudia Zanda. "Archeologie autostradali." In *Memorabilia. Nel paese delle ultime cose*, edited by Sara Marini, Alberto Bertagna, Giulia Menzietti (Roma: Aracne, 2016); Fontanella, Elena. "Per un'archeologia del presente autostradale," *ARK* 18 (2016): 59-62.

^{8 &}quot;Mi-Bg 49 km Seen from the Motorway". Exhibition edited curated by: A. Gritti, P. Mestriner, D. Pagliarini; Research group: E. Fontanella, A. Tognon, M. Voltini, C. Zanda, with G. Agazzi; Photographies: G. Hänninen. From 25th September to 31st October 2015 in Dalmine (BG). From 13th March to 2nd April 2016 in Seriate (BG).

in 2015 as part of "TXtra travelling with the Triennale" - studied the motorway between Milan and Bergamo (completed in 1927), documenting both the development dynamics of the infrastructure itself and of the crossed territory. The research highlighted the driving role of the motorway in creating high spatial quality architecture and landscapes. Considering these issues, the importance of a design approach focused on infrastructural nodes emerges. These are intended not only as built artefacts, but as wider and more articulated systems made up of buildings and highly specialized open spaces. Today, it is significant to intervene in these areas in a retrospective way (which looks at what has already been done in the past and at the current conditions of the existing heritage) and in a projective one (assuming that motorway nodes are a precious opportunity to act on the relationship between infrastructure and surrounding territories, by exploring new programmatic articulations capable of supporting innovative practices and uses).

The paper¹¹ is organized into three sections¹². Each has an antinomic pair of concepts at its core, which clarifies the reasons for the relevance of a transformative design action applied to the motorway nodes: *systemic/punctual*, *network/node*, *present/future*. The fourth and last section, in the form of conclusions, deals with the case study of the service areas along the Brenner motorway (Campogalliano–Brennero).

Systemic/punctual: in between scales and speeds.

The relevance of a design strategy oriented to motorway nodes is primarily due to the condition that arises from being part of an extended system (on a territorial scale) whose effects are linked to specific geo-

⁹ The exhibition was part of the program "Triennale Xtra. In viaggio con la Triennale undici Mostre di architettura, arte e design nei capoluoghi lombardi", that was promoted by Triennale Milano during Expo 2015 semester in Lombardy region provinces.

The photographs by Giovanni Hänninen recomposed "architectures", "landscapes", and "elements" (the three sections of the exhibition "Mi-Bg 49 km Seen from the Motorway" in their original unity.

Supervision and Writing, A.G.; Writing and Original draft, E.F.; All authors have read and agreed to the published version of this paper.

The paper focuses on motorway infrastructures and nodes in the Italian context, keeping European and American experiences as relevant reference points.

graphical positions (as for toll booths, barriers, and service areas).

Being the simultaneous expression of an extensive system and a local condition, motorway nodes control the relationships between the large scale (typical of the motorway and the crossed territories) and the local scale (understood as the specific area in which the node is located, making its surroundings accessible). Furthermore, it should not be forgotten that between motorways and surrounding areas, there is, in perceptive terms, a two-way relationship: one of seeing from the motorway towards the surroundings and one of being seen from external observation points, in motion or in quiet conditions. In this two-way relationship, toll booths, service stations, and rest areas represent junctions where the accelerated time of the motorway movement is replaced by lower speeds or by a stop. In the case of service stations, the momentary abandonment of the vehicle (as the element of mediation in the perception of the surroundings from the lanes) is added to this change of state from motion to quiet.

These characteristics help to feed the opportunity to integrate the development of motorway infrastructures with the conservation and enhancement of the crossed areas' cultural, landscape and environmental heritage. Rarely permeable from the outside (in Italy, service areas can be reached by ordinary street network just from its employees through an entrance inaccessible to users), service stations could represent new opportunities for intermodal exchange, intercepting slow mobility systems and allowing accessibility to adjacent areas. Thanks to the nodes, the "aged infrastructure" could become a "variable infrastructure, capable of adapting to the transformations that are growing around".¹³

Thanks to their belonging to different scales, systemic and punctual conditions, speed and stasis, motorway nodes could connect and relate elements. Inside the motorway carriageway, the first line of vision is often made up of trucks, which form a moving backdrop, increasingly impenetrable to the eyesight. This presence makes it difficult to per-

¹³ Ferlenga, Alberto. "Post-Tassonomia autostradale." In *Mi-Bg 49 km visti dall'autostrada*, edited by Andrea Gritti (Soveria Mannelli: Rubettino editore, 2015), 25.

ceive the "background", "what really matters". 14 Service stations, parking areas, and toll booths could represent "open doors" to the territory through the interconnection with slow and pedestrian mobility systems. They would thus give shape to permeability systems to take advantage of the presence of notable elements on the sides of the motorway. It could indeed turn into a porous 15 device.

A research-by-design applied to motorway nodes, as remarkable elements of an extended system, could represent an opportunity to resume the Italian interrupted project, attempting to combine technical skills and formal qualities. A design action focused on motorway nodes could also embody a new season of interventions on infrastructures in Italy, to be opened under the sign of architecture, art and landscape to improve both the quality of the territory and the life quality of those living there¹⁶. In this perspective, motorway architectures can be considered a framework for the prefiguration of formal, typological, and technological scenarios, capable of reducing environmental and ecosystem impacts.

Net/node: design issues, goals, expected results

The relationship between the motorway network and its nodes can be read in two ways. The first one, longitudinal, facilitates the connection with the infrastructure in terms of *continuity* (such as extensions that accommodate service functions and threshold points that regulate entry and exit from the system). The second one, transversal, promotes the relationship with the territory regarding *discontinuity* (moving away from the carriageways always implies a change in speed or a stop). This double reading mostly adheres to the description of motorways as closed systems, impermeable from the outside, if not from barriers and toll booths, designated for entering and exiting the route. In a perspective oriented towards a greater integration with the surrounding,

¹⁴ Ibidem.

Rouillard, Dominique, and Alain Guiheux. "L'autoroute osmotique." In *Le projet hub. L'architecture des nouvelles mobilités* (Genève: MetisPresses, 2020), 99-108.

¹⁶ Ferlenga, Alberto, Marco Biraghi and Benno Albrecht, eds. L'architettura del Mondo. Infrastrutture, mobilità, nuovi paesaggi (Bologna: La Triennale di Milano - Editrice Compositori, 2012).



Fig.1 km 255+400, Pylons and motorway, Caselle-MN; Source: Giovanni Hänninen, 2021

pedestrian permeability, and intermodal exchanges, the transversal relationship could generate new forms of continuity. It could enhance the potential offered by the exchanges between fast and slow mobility systems. In this sense, it is a question of understanding whether the double system of longitudinal and transversal relationships is meant to change with the introduction of these transformations or if, on the contrary, it is resistant over time.

In their being places dedicated to welcome services for users and vehicles, the motorway nodes are emblematic spaces for deepening the relationship between architecture, technology and sustainability and for testing the evolution of components linked to transport systems. In this sense, the nodes are privileged areas of experimentation for evaluating and testing the relationship between ecological transition and large infrastructures.

The reduction of polluting emissions and new systems for the digitization of motorway mobility can be taken into consideration for this purpose, acquiring an approach oriented toward motorway transformation from a "passive" and "energy-consuming" infrastructure to an "intelligent" infrastructure, a source of energy production.

Within this framework, a new architecture of the motorway nodes could significantly contribute to a deep transformation of the infrastructural system. Local and global relationships meet in the motorway stations (barriers and toll booths) and in the service areas. Therefore, it appears possible to maximize the benefits derived from introducing new uses or from the digitization of mobility-related technologies.

Improving the energy balance in large transport infrastructures could benefit from the structural effects of interventions on motorway junctions aimed at optimizing energy production, waste management and reduction, rainwater collection, and increase in soil permeability. These design themes acquire an approach already tested for some time in the architectural and urban design field on existing fabrics and buildings (reuse, recycle, regeneration) and implement it to large transport infrastructures.

The twelve "Themes for Italy" presented at the end of the book entitled "Architetture del mondo" offer various ideas to encourage "a new infrastructural policy that turns into an opportunity for the redevelop-

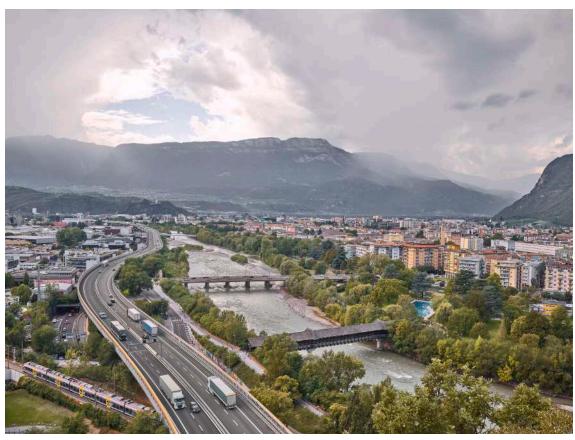


Fig.2 – km 82+300, Bolzano; Source: Giovanni Hänninen, 2015

ment of the entire national territory"¹⁷. In particular, six of these issues are meaningful for design interventions on motorway nodes: *permeability* (as an opportunity for development and knowledge of neighbouring territories starting from the contiguity with natural or cultural assets); *reciprocity* (in a perspective of interconnection between different mobility systems); landscapes knowledge (to be enhanced and not mitigated, if the relationship between infrastructure and landscape is the object of attention and design interest); the *energy transition* (both in terms of savings and production); the responses to climate change (whose effects we experience every day, being environmental systems its victims); the ability to adaptation and development (by strengthening existing networks, without replicating past methods).¹⁸

The design experimentation applied to the motorway nodes can aim to achieve a twofold result: the development of guidelines potentially applicable in different contexts and design insights applied to specific cases, feeding the relationship systemic/punctual and generic/specific from a design point of view.

Present/future: the times of the motorway

Motorways have a very particular relationship with time. Persistence and variability overlap, leading this relationship to an apparent paradox: the continuous changing of the parts makes it possible for the whole to persist.¹⁹ Motorways represent resistant and persistent elements in the territory's structure, which they contribute to form. At the same time, motorway components are subject to frequent maintenance cycles, functional to the efficiency maintenance: hence a significantly shorter duration. The ordinary and extraordinary maintenance on motorway networks operates more in the direction of replacing and rewriting than in that of modification and stratification, especially in

¹⁷ Ferlenga, Alberto, Marco Biraghi and Benno Albrecht, eds. L'architettura del Mondo. Infrastrutture, mobilità, nuovi paesaggi (Bologna: La Triennale di Milano - Editrice Compositori, 2012), 391.

¹⁸ Ferlenga, Alberto, Marco Biraghi and Benno Albrecht, eds. L'architettura del Mondo. Infrastrutture, mobilità, nuovi paesaggi (Bologna: La Triennale di Milano - Editrice Compositori, 2012), 390-403.

¹⁹ Fontanella, Elena. "Per un'archeologia del presente autostradale," *ARK* 18 (2016): 59-62.



Fig.3 – Milano/Bergamo motorway, Via Adda, Capriate San Gervasio-BG; Source: Giovanni Hänninen, 2015

the superficial layers. Stratification, if present, is allowed only on very specific spots. This happens, for example, in the structure of widened bridges and viaducts.

This characteristic suggests that the cyclical replacement of the motorway elements (which also affect its nodes) is also the key to structural innovations of the components. Although referring to the technological and material dimension, component replacement has relevant consequences on the spatial dimension, deserving to be investigated in a systemic and integrated perspective. However, while on the one hand, motorways are frequently maintained and transformed, on the other, "preservation, normally excluded from practices referring to the motorway, must be defined in this specific field".20 The rethinking of preservation practices of buildings and motorway routes appears increasingly necessary about recent demolitions (eg. Montepulciano Autogrill) and radical renewal interventions (Villoresi West Autogrill, both designed by Angelo Biancheti). In a broader perspective, it would have been significant to open a debate on the implications of these choices and the possible alternatives for enhancing the modern heritage.21

Simultaneously, the present time is equally relevant. It offers a specific reference for evaluating changes indeed: with respect to the past, but also with respect to the future, leading to new possible uses (for example, including services currently not present along the motorway, also intended for local communities). Furthermore, rooting the design action in the present time corresponds to the approach of assuming the existing as a resource (in spatial, material and energy terms) for the design action.

Regarding the motorway nodes, the knowledge of the current state of service stations, rest areas, toll booths, and barriers also represent a fundamental moment to base transformation scenarios and new imaginaries. This scenario would allow us to question the capacity and effi-

Zanda, Claudia. *The architecture of a motorway. Between maintenance and preservation* (Siracusa: LetteraVentidue, 2020), 71.

Testoni, Chiara. "La demolizione dell'autogrill a ponte di Montepulciano." Domus web (2021), https://www.domusweb.it/it/notizie/2021/10/15/la-demolizione-dellautogrill-a-ponte-dimontepulciano-.html



Fig.4 – km 1+500, Plessi Museum, Brennero-BZ; Source: Giovanni Hänninen 2022

ciency of the existing motorway network in a future-oriented perspective to avoid the construction of new routes and, consequently, limit new land consumption. In this perspective, the implications of this approach on the built space can be concentrated on everything that already exists along the motorways and around them in terms of relationship and spatial quality.

Assuming the existing as a starting condition opens a dimension of environmental sustainability linked to the duration of the artefacts, the recycling and reuse of components, the recirculation of embedded energy, and the containment of soil consumption. The development of strategies oriented to open spaces in motorway nodes should pay attention to the permeability of soils and to the energy production by taking advantage of the sun, the wind, the rain, and the vehicular flow itself.

In conclusion, a significant case-study: service areas along Brenner Motorway

The service areas along the A22 motorway (Campogalliano–Brennero), designed and built between 1960 and 1974, were at the centre of the investigation in the *Alta Scuola Politecnica*²² course entitled "TNA (A22) MSA – Towards a new architecture for the service areas of the A22 motorway".

In this context, the new architecture of the service areas offers a twofold opportunity:

- To open the motorway to the territory extending multi-modal practices to the entire system of slow and fast networks, amplifying the access of tangible and intangible heritage in the area crossed by Brenner Motorway.
- 2. To develop very innovative technological content suited to the ecological transition in the short, medium and long term, promoting the hybridization between conventional and creative uses.

Within this framework, the project goal is to develop theoretical and practical research focused on the relationship between motorway

Alta Scuola Politecnica – Politecnico di Milano, Politecnico di Torino. TNA (A22) MSA started in 2021 and ended in september 2022.

infrastructures and the architecture of service areas to prefigurate formal, typological and technological scenarios capable of implementing practices complementary to mobility. The course focuses on up-to-date considerations of the relationships between infrastructure, environment, landscape and territory, activating intersections with dynamic fields of knowledge: the study of ecological systems, energy resources, and social communications. The potential beneficiaries are current and future motorway users, concessionary companies, companies offering services related to mobility.

Stakeholder

The project stakeholder is Autostrada del Brennero SpA, a public limited company. Of its shares, 84.7% are held by Public Bodies in the areas through which the A22 passes, private shareholders account for 14.1%, while the Company itself owns the remaining shares. The Company operates under a public services scheme with the main aim of "promoting, planning, constructing and operating tollways, including the Autostrada del Brennero Verona–Modena, known as the A22"23.

Background

The project follows some experiences faced in recent years both in the teaching²⁴ and research fields. In particular, it refers to "Mi-Bg. 49 km seen from the motorway", research coordinated by Andrea Gritti and "In.Fra - Insediamenti e Infrastrutture" led by thirteen Italian Universities and coordinated by Aimaro Isola.

Research fields

The experimentation applied to A22 service areas tested four research fields, through the design actions:

Urban, interior and landscape architecture, developing design solutions to interpret the relationship between the infrastructure and the physical and social context of the service areas and their surroundings; ecological and environmental design, promoting sys-

- 23 <u>https://www.autobrennero.it/en/the-company/organisation/</u>
- 24 Master in "Road Architecture", Politecnico di Torino.

temic integration between road infrastructure and soils at all scales of intervention:

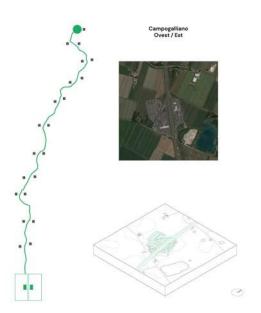
energy engineering, reflecting on the evolution of energy components related to transport systems and their influence (past, present and future) in motorway transformation.

Management and information engineering, interpreting the current modes of use of the motorway and predicting their evolution (e.g., sharing-mobility) in compliance with safety and efficiency rules.

Elements of innovation and multidisciplinarity

The project is innovative for some complementary reasons:

- 1. it is in discontinuity concerning the practices of the motorway project in the Italian context of the Second World War, which was focused on the point of view of transport engineering. Conversely, the project is based on a multidisciplinary approach involving engineering, architecture, planning and design. It proposes a return to "road architecture".
- 2. it develops solutions aimed at defining new relationships with the elements of interest along the different crossed landscapes (sites of natural, cultural, monumental interest, FAI or UNESCO heritage) with a view to networking with other mobility systems at different speeds (car, train, local public transport, bicycles, self-driving vehicles, cableway installations).
- 3. it calls for an extended group of scholars to contribute in two different ways:
 - a board of professors that elaborates critiques to improve the design projects;
 - some invited experts that give thematic insights: Laura Greco (scholar of history of motorway architecture), Dominique Rouillard (coordinator of the Laboratoire Infrastructure, Architecture, Territoire), Antoine Picon (scholar of the relationships between transformations of technological systems and forms of the infrastructure), Kelly Shannon, Marcel Smets (experts in contemporary design experimentations on motorway architecture), Joao Nunes (land-scape architect), Jacopo Gentilini (director of the eng. Lino Gentilini Foundation).



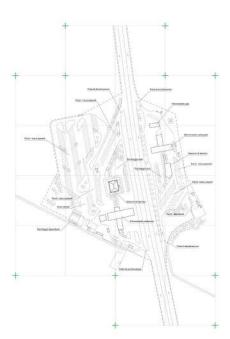


Fig.5 – A22 motorway, Campogalliano service area – Source: Alta Scuola Politecnica course "TNA (A22) MSA - Towards a new architecture for the service areas of the A22 motorway")

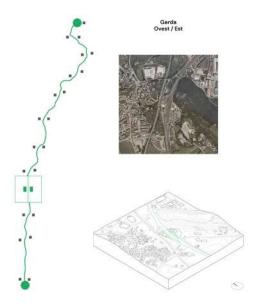




Fig.6 - A22 motorway, Garda Ovest service area - Source: Alta Scuola Politecnica course "TNA (A22) MSA - Towards a new architecture for the service areas of the A22 motorway"

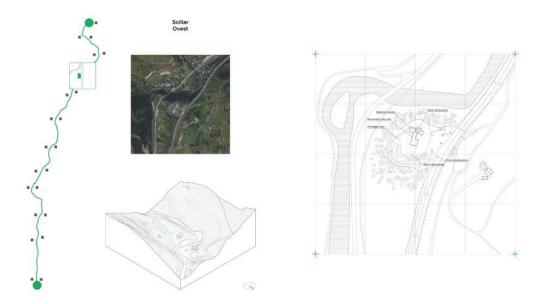


Fig.7 – A22 motorway, Scillar Ovest service area – Source: Alta Scuola Politecnica course "TNA (A22) MSA – Towards a new architecture for the service areas of the A22 motorway")

Results

The results of the projects can be briefly summarised in the following outcomes:

The preparation of a guidance document, configured as a tool to guide future transformations of all service areas.

the design of innovative interpretive maps, which describe the relationship between infrastructure and crossed territory;

the definition of some exemplary design projects for specific service areas selected with the stakeholder's contribution among the 22 currently present along the route.

According to these outcomes, the project encourages the construction of motorway service areas consistent with international experiences defined as "good practices". It tests the potential of nodes by experimenting with new solutions for enhancing the reciprocity with the surrounding areas, supporting new uses by introducing new services and functions and implementing solutions for supporting the energetical transition.

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City Streets and Linear Cities - More Than Just a Line

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Abstract

There are instances where a street is more than just a street. Such is the case when it might become an inhabited infrastructure, a sort of linear city. The case study presented is one such attempt at a linear settlement that becomes more than just a street, more than just a linear city. Rather it becomes a mechanism for creating new possibilities for economic and cultural production and for the redevelopment and regeneration of the underused buffer zone on the island of Cyprus. At the same time, it offers on one hand the possibility for the rapprochement of the disengaged communities on either side of it as well as the unlocking of the economic potential of the dormant land it occupies. In this latter incarnation it may well offer alternative habitation and a means for sustenance to the significant influx of immigrants arriving to the island's shores.

Keywords

Linear City, Inhabited Infrastructure, Corridor Development, Demarcation Line, Buffer Zone

Introduction

The premise for this paper is the development potential of the demarcation line or buffer zone in Cyprus, running acroos the island from east to west and splitting it in two in the form of a linear corridor.

This "no man's land" varies in width from a few meters where it is also known as the "Green Line" where it traverses urban areas in cities, towns and villages, to a few kilometers in the agricultural areas of the Mesaoria Plain. It spans the island from the Bay of Morphou in the west to the Bay of Famagusta in the east, both named after their respective district capitals. A few villages have found themselves enclaved in

this zone such as the bicommunal village of Pyla in the Larnaca District in the east of the island and the village of Mammari in the west of the island west of the Nicosia Capital Region. Away from urbanized areas this no man's land, which as noted above can get to be a few kilometers deep, is characterized by agricultural lands, many of which lie underutilized and fallow.

This synchronicity and synchoricity of circumstances that applies to this underutilized agricultural and farming land, may however be seen in a positive light, especially in view of such initiatives in the buffer zone in downtown Nicosia as presented by the Home of Co-operation, officially opened in 2011. It functions as a unique community center located in the middle of the dividing line in Cyprus, in the Ledra Palace area, UN Buffer Zone, Nicosia. Today the Home for Cooperation has become a landmark building in Nicosia, acting as a bridge-builder between separated communities, their memories and their endeavors through its physical presence and its peacebuilding programs, benefiting from the transformative power of cooperation amongst residents of Cyprus on both sides of the dividing boundary.

This body of work, tries to answer the question of whether this initiative may be extended and become broader in its function. It is perhaps a utopian vision, but the work will try to examine diplomatic precedents on the island, as well as mechanisms of planning for a physical infrastructure that might make the most out of its location in this no man's land.

The geopolitical context

In a context of de-territorialisation where political authority indicates shifts and there is an increasing uncertainty as to what is local or domestic and what is foreign (Constantinou and Hellmann, 2012) one often sees instances where policies are strained to follow and address current situations in international relations (Nicolson, 1963; Kissinger, 1994). Normative and ethical implications need further exploration as does a more critical approach of such notions as: "diplomatic culture" (Wiseman, 2005), bureaucratic routine (Neumann, 2012), diplomatic flexibility (Copeland, 2009) "diplomatic thinking" (Sharp, 2009) and "sustainable diplomacy" (Wellman 2004, Constantinou and Der Derian,

2010). Authors dealing with definitions of these critical frameworks make the distinction as to which of these may be defined as objectives and which as tools (James, 1993). Counterarguments have come from approaches linked to sociology and anthropology that begin to describe a social function in boundary demarcation, construction, management and maintenance, which may in turn be linked and applied to physical planning (Campbell, 1992; Doty, 1993; Hill, 2003).

In a context such as the one described above, the result of a conflict which has resulted in a demarcation and buffer between opposing sides, brings forth the issue of what to do with respect to cultural heritage in this contested zone that contains underutilized built and natural land-scapes. The question is asked as to whether it can be put to use as a venue not only for reconciliation and as a zone of production, of cultural regeneration and of economic redevelopment (Constantinou and Hatay, 2010; Demetriou, 2012). Indeed, action in such areas of contestation may lead to restoration and regeneration within an area that may benefit from reacquiring a critical perspective and to embrace the positive message of unity in diversity in such a way as of making heritage anew and re-articulating the brand of what we understand as "The Green Line."

This zone of historical and cultural values, is controlled by INFICYP, but it also shares borders with the British Sovereign Base Areas in south-eastern Cyprus, and it includes abandoned and underutilized buildings and settlements, agricultural and farming infrastructures and even an airfield and a fishing harbor (Figures 1 and 2). These remain in great part outside the daily experience of the residents of the island and lie oftentimes dormant under the purview of these international entities. (Fig.01 and Fig.02)

Consequently, this rather fluid administrative situation creates what may be described as an ambiguous border condition that is difficult to integrate in the spatial fabric of effective and productive spatial planning on the island in ways that might have developed new cultural and economic narratives for this zone of demarcation that holds the promise of shared futures and the possibility of environmental rehabilitation, restoration, adaptive reuse and finally regeneration (Constantinou et al., 2008; Constantinou, 2010).

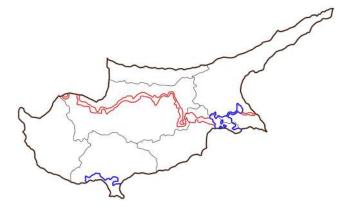




Fig.1
Fig.2 - Map of Cyprus with Buffer Zone (Green Line) in red and British Sovereign Base Areas in blue, with related photo and City of Famagusta in background (images adapted from Wiki images)

Aspects of Fragmentation and Marginalization

There is also another perspective to be considered that of what Pieterse & Parekh (Pieterse & Parekh, 1995) call the stories of the 'margins', 'minorities', 'outcasts', and other 'fragments' is valorized as a 'decolonization of imagination' that is becoming increasingly important in post-colonial areas (Wa Thiong'o, 1992), such as in Cyprus (Hadjimichael et al., 2020) and the immigration circumstances that have prevailed there in the last couple of decades. They present the possibility of addressing alternative cultural forms (Chakrabarty, 2000; Smith, 2021) and having the potential of revisiting the recent history of the island and spatially reconstituting it by taking into account recent dynamics and representations that have come about as a result of social and cultural change (Balasopoulos, 2008). The spaces associated with such locations may assume new projections and imaginaries as social spaces as defined by such theorists as Lefebvre (1991) which "...cannot be adequately accounted for either by nature (climate, site) or by its previous history" or by solely ecological or national/political terms.

This situation may be enabled by perhaps adopting notions of what writers have called a more "liquid entitlement" (Constantinou and Hadjimichael, 2021) that affords agility and flexibility in possible zoning jurisdictions (Agnew, 2005; Sassen, 2013a), "spatial enclosures" (Bosniak 2007), "territorial traps" (Agnew, 1994) or even socio-political territorial transformations (Brenner and Elden, 2009), which according to Elden (2010 and 2013) are derived from terra – earth, (dry) land – and linked to terrain – as these develop strategic / political relations with the land in question. In rethinking what may be permissible with regards to territory, imaginaries may redefine the rights to the use of appropriated land that may lead to the (re)creation of land linked to common uses.

This land, commonly utilized and worked upon, may provide common sustenance and by extension it may afford the possibility of reenlisting underutilized land and finding therein new socioeconomic potential from this everyday urban footprint (Varro, 1938). This process of communing may strengthen the sense of ownership and commitment to a footprint of land whose limits and boundaries have undergone a process of rethinking its spatial, societal and economic relations

(Linebaugh, 2008) and it may also begin to acquire a degree of autonomy from the established powers of administration (Sassen, 2013b). Sassen (2008) also notes that in such conditions of embedded zoning in pre-existing boundaries an interesting condition would be that a globalized and interdependent construct, more so that the more static situation offered by national boundaries, wherein hybrid authorities in more liquid administrative frameworks might assume responsibility supported by national legal frameworks and also by international law.

These frameworks, which may be characterized by more informal governance (Krisch, 2017) may display aspects of jurisdiction that may be both functional and also concurrent to other frameworks already in place (Gabunele, 2007) and they may cater to this new zone's unique development needs (Foley and Mather, 2019) in the sustainable use of this common ground (Ostrom, 1990; Vogler, 2000).

Analysis and Categorization of Spatial Topographies

Analysis and categorization in such a diplomatic context may be multilateral (Constantinou et al., 2021; Adler-Nissen, 2014; Pouliot, 2016) or humanitarian (Sending, 2015; Turunen, 2020) and in an expanded view of sites and spaces (Neumann, 2012) they may begin to increase sociability and social interaction (Hurd, 2015; Kuus, 2015), to support informal associations between a diverse group of individuals (Wiseman, 2015) and to augment performance (Adler-Nissen et al., 2017), when incorporated into hybrid institutions (Merry, 2006).

In response then to the premise stated above and taking into account the spatial, political and economic topographies prevalent in Cyprus in general and to the UN Buffer Zone (also known as the "Green Line"), an attempt has been made to identify appropriate urban formations, evolving from these unique planning challenges that may be adopted, situated and further developed in this context (Collins, 1960; Collins, 1959; Hotelling, 1929/1990; Le Corbusier, 1925 and 1946; Lynch, 1954; Wright, 1958; Mazaev, 2014; Shubenkov, 2015). The concept of linear developments as a means of touching the ground sparingly yet laying claim and partially controlling territorial growth seems to afford a tool that matches the performative parameters outlined in the preceding section.

In the nineteenth and twentieth centuries such formations were associated with so called "linear cities" that emanated from mixed-use integrated mobility corridor infrastructures. An analysis into the development of these linear infrastructures has been associated with restrictions related to more complex and restricted spatial and administrative regimes in physical planning (Antyufeev and Antyufeeva, 2019). An early example being a concept put forward in the 1880s by Spanish engineer and philosopher Soria y Mata in Madrid's capital region (figure 3) and later on the concept was reintroduced in Milyutin's "strip city" and Hilberseimer's (1955) "linear belt" as means of new forms of redevelopment and resettlement (Tufek–Memisevic and Stachura, 2015). These in turn lead to the creation of functional streamlined systems that matched production flows to transportation and physical planning. (Fig.03)

Further restructuring factors of urban planning that might have led to establishing external socioeconomic linkages to territorial and spatial control as a result of such a dynamic process were also voiced through the 1950s, 1960s and 1970s by such city-building practitioners, urbanists and theorists as, Doxiadis (1967), Collins (1968) and Whebell (1969), based on system changes to multispeed radial-axial supply and development schemes.

Furthermore, in a more connected globalized outlook for the future these corridors may be thought not only as mechanisms that enable transportation-assisted spatial flows, but also as space-enabled flows of value-recapturing environmental, social, cultural and economic production and with the ability to partially resolve complex problems in physical planning and territorial administration. Referring to bibliographical and project precedents and case studies by the pioneers listed above, linear planning forms may address: the optimization of spatial form and territorial economic development as mentioned by Hotelling and the management of urban systems, as growth entities, as described by Bocharov, Gutnov, Lezhava, Doxiadis and Le Corbusier amongst others.

In North America, "smart growth" and "complete streets" policies, transit-oriented development and bus rapid transit proposals have been put forth in support for effectively moving people and goods and in

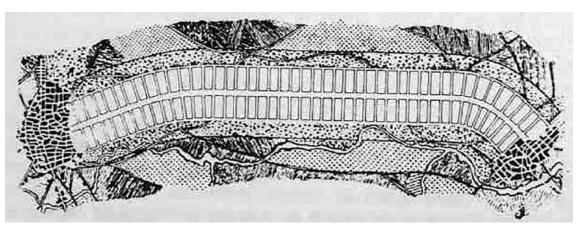


Fig.3 Soria y Mata's 1882 linear city proposal (image adapted from Wiki images)

envisaging what have been termed as "complete communities" (Salimbene et al., 2020). Spatial requirements have been matched to more sophisticated and flexible growth strategies that "combine economic competitiveness with social and environmental protection and with notions of communal equity and fairness". On a parallel track in Europe in the Netherlands, planners tried to rethink spatial organization along nodes of development and lines of major infrastructures within multipolar urban networks (Sap, 2007). Promoters – such as R. Collins, C.F.J. Whebell and C. Doxiadis - though examining the prospect from different disciples and points of view - architectural history, geography and urban planning / design, respectively - discussed aspects of visibility and connectivity potential in corridor development. They stated that the "bundling of ingredients and infrastructures" might lead to a broader definition of the ordering principles for the creation of productive landscapes "with trans-shipment locations focusing on deliberately supporting of spatial development" and with the deliberation concentrating on three proposals: the corridor as urban development axis; the corridor as infrastructural axis; and the corridor as economic development axis (Sap, 2007; Priemus, 1999). More specifically, the architectural historian George R. Collins presented the emergence of linear corridor infrastructures as the result of ecological and topographical circumstances in the context of modernist ideas (Collins, 1968). As such it may be described as a conveyor of people and services and infrastructures that are repetitive in character and may be extended in increments.

Concluding thoughts on the development potential of the Green Line

In considering the preceding section's references as primers for a project proposal, a well-known precedent has been examined that conforms to many of the infrastructural and spatial requirements stated above. This is Edgar Stephen Chambless' utopian 'Roadtown' (Chambless, 1910), which as in Soria y Mata's proposal for a linear city in 1882, it promulgated "a radically modernizing concept for the city as a literal embodiment of the centrality of transportation . . . a line of city projected through the country in the form of a continuous house; in the basement are to be placed means of transporting passengers, freights,

parcels and all utilities" (Figures 4 and 5). Even before publication, this concept attracted the support of such notable personalities of the time as Thomas Edison and William Boyes, who donated their patents for moulded-cement housing and for a monorail conveyor, in support of such a project, as well as such as by Milo Hastings, "whose subsequent science fiction novel 'The City of Endless Night' (1920), went on to present a dark vision of this modernizing imperative" (Abbott, 2016). (Fig.04 and Fig.05)

So, in exploring the circumstances that might enable such structures to unlock latent development potential in linear corridors, one may need to couple transportation infrastructures to the idiosyncrasies of land administration and architectural programming (Savvides, 2012 and 2017) and to find synergies where many activities are physically close together, as stated by Voith (1998) and Boroski (Boroski et al., 2002). Moreover, according to Thorne (Thorne et al., 2009), built-in flexibility is essential to ensure that the proposal may transformed in time to meet future demands, in accordance with strategic planning objectives and in collaboration with the multitude of stakeholders (BRA, 2000), so as to address challenges and not in a piecemeal way.

In conclusion then, the major purpose of this outlay of information has been to provide a redevelopment framework, however utopian in nature, wherein all Cyprus residents (permanent and non-permanent) regardless of nationality, such as Greek-Cypriot, Turkish Cypriots, British Base residents and other possible interested parties, may reside in this new regime and to join its workforce. Simultaneously, this scenario can be a key catalyst for the country's diplomatic efforts, as the country's guarantors could assist with the development of this new and temporary regime. In addition, securing the Buffer Zone territories for use by permanent and non-permanent residents in this fourth regime, may be the addition of an economic catalyst and generator that would allow economic exchange, environmental restoration, social enhancement and cultural protection. Proposing the creation of a linear entity in these areas will open new opportunities for the case in point, taking into consideration both locational assets and political expediencies to rethink possibilities and opportunities for an otherwise fallow landscape to a model of temporary resettlement and flexible production.

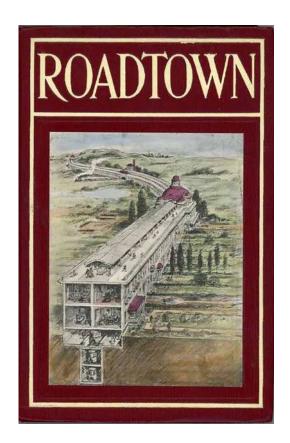




Fig.4 Fig.5 "Roadtown" (image in the public domain)

And it is in this context that the effective exploitation of the developmental potential of this entity's productive capacity may be realized, while respecting the longstanding memories and geopolitical tension that exists in that region.

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Via Antiqua – a road to understand the city and the territory

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Abstract

Via Antiqua was the oldest Roman road from Braga (Portugal), to Astorga (Spain), through Chaves. Associated to the establishment of Bracara Augusta and Asturica Augusta, it was part and parcel of the extraordinary Roman Road System and introduced major changes in the landscape and in the territory that it crossed, setting a design pattern that remained central not only when it was built, but throughout the various rearrangements along the millennia. Unfortunately, the Roman road is almost invisible nowadays. Apart from a few sections still recognizable, time and misconceptions about the original techniques used in Roman times, may well explain the abandonment and changes that most of the Roman roads suffered along the centuries, all over the Empire. The ongoing PhD research at the Architecture School of the University of Porto, aims to study ways of turning Via Antiqua visible once again, as well as to stress out its importance to the construction of the landscape, its role to redeem the identity of old places and sites, and the way it may serve as a privileged instrument to understand the territory and its history, in a transnational perspective.

The present paper, at an early stage of the research, aims to use the ancient road as a key to understand the landscape and the territory, and as a tool to design and planning, because it is charged with meaning and information, and works in different scales, from the neighbourhood to the territory. By doing so, it will be possible to make the Roman Road "visible" again.

Keywords

Roman Roads, Architecture, Landscape, Cultural Routes

The Roman Road from Braga to Astorga, through Chaves, played a strategic and fundamental role in the organization of the territory from the north side of Portugal and the plateau of Leon, in Spain. Inserted in



Fig.1 - The Roman Road Network on the Iberian Peninsula, Via Antiqua signed in red - Source: Mercatore Roman, Catalan Institute for Classical Archaeology, 2008; and João Fonte, César Parcero-Oubiña; José Manuel Costa-Garcia, 2017

the vast road network built as the Roman Empire expanded by the time of *Augustus* (I B. C.), its design and the set of relations that *Via Antiqua* established with the various places along its course, still remains visible in some sections, almost two thousand years from its original construction. Nevertheless, the importance that the Road has on the territory of the present and, most important, can have in its organization and future planning, is yet to demonstrate. Our hypothesis is that the old Roman Road still plays a fundamental and active role in the organization of the territory, even though it is virtually invisible. In other words, the Roman Road can induce design, land use planning and territorial cohesion.

Like pointed out by Vittorio Gregotti, the road is layout and built object and one ought to turn "the architectural solution of these very problems into a central question (...), offering the specificity of our disciplinary tradition to their qualitative organization and at the same time of providing the architectural plan with methods and viewpoints capable of enlightening new aspects of them". The road should be studied and analysed as an architectural object and part of the land-scape and its organization.

Architecture has been aside from all the issues related with road design and its construction. That could be explained with the monofunctionality of the road, seen as car container, and to the assumption that roads are from the domain of the infrastructure, without care for its design or impact and consequences on the landscape. If it is true that there is no classical theory about the architecture of roads, "Roman roads were made, obviously, as architectural objects and, although they do not appear in the classical texts or books, they are still on the landscape and form a body of reference, as they integrate the classical canons of Architecture". Leon Battista Alberti, on his "De re aedificatoria" inspired by Vitruvius's work – The ten books on Architecture, considered the road as building art, as a fundamental element in the landscape and public building by definition. In light of the founding principles of architecture, as described by Vitruvius – utilitas, firmitas and venustas¹, Alberti said that the roads should be considered in terms of

¹ Usefulness, solidity and beauty.

comfort and, above all, beauty, which should be the purpose of building roads. Roads' usefulness ought to be subordinated to beauty, that lies in the relations between the road and the places and territories it crosses.

The scale of the territory includes architecture, whose object is the city and all the space transformed by men. But, in order to draw the territory, as well as the landscape, is necessary to seize its circumstantial and intangible value, is necessary to perceive its representation as common knowledge and, because "human activities over a given geographical support built the landscape patiently and consistently over time, (the landscape) is always historically built"3, as a work in progress. Therefore, it is vital to search for the *genius loci*, the uniqueness of places, at the same time that one considers the necessity of building a holistic vision of it. Places understood as "qualitative totalities of a complex nature", that is the entire territory where *Via Antiqua* passes. In other words, one ought to try to give back the meaning to some places, which nowadays are perceived as "non-places" or merely functional places. To be able to propose any sort of action in this territory, one needs to depicture it. But, perhaps, it would be preferable to do it through small gestures, rather than through large interventions.

The choice of talking about roads and about this Roman Road in particular is well explained for its importance in the past and its capacity to help us understand the territory and to design it overlapping multiple sensitivities. Juan Luis Rivas Navarro refers the "capacity of the roads as longitudinal elements that can be assimilated to lines. (...) Thereby architecture becomes geography, the present becomes past and the past can be placed near future plans." That is to say that the longitudinal section of the road allows a sight from the past into the future of the landscape and the territory. On the other hand, to work and to study old roads is more important than ever, especially if one intends to understand the problems and questions regarding depopulated territories, intermediate spaces between what used to be classified as "city" and "countryside".

Those intermediate spaces are a continuum of land modified and 'urbanized' since long time ago². "The grid pattern which (the Romans)

² André Corboz, author of "The Land as Palimpsest", refers the evidence for "visible signs of an essentially urban activity whose goal

imposed physically on all its conquered lands provides an extreme example of wilful configuration still visible today". So, in a context of increasing dispersion and mobility, like the one we are living nowadays, roads are indispensable, for they are to be considered in multiple dimensions. Roads can present us with a longitudinal point of view of the territory and become some sort of narrator of the landscape, as they are the empty space of the cities that look into the buildings, architecture and all the life within the cities and, on the countryside, by opposition, they are usually the built space, surrounded by open fields or forests.

In the present paper and on the ongoing research, one refers to *Via Antiqua* as a road that is territory, using the notion developed by Juan Luís Rivas-Navarro (*Calle Ciudad*), a road that crosses all the research as a metaphor of its layout, through the Portuguese and Spanish territories. If one of the best ways of looking to the cities and territories is to cross them, the longitudinal section and layout of *Via Antiqua*, as a transversal road of the northern side of Portugal, gives us a chance to do that analysis. In other words, the old Roman Road can give us a sufficient vision and understanding (it will never be the perfect and complete one, because there is no such a thing like the perfect vision or a meta-speech over the territory and a complete description of the reality), and, in the end, it should contribute to the definition of planning policies.

As a starting point, one proposes a set of "windows" in the course of the road, matching singular places in Roman times. These places were considered structural as they were positioned along the road between Astorga and Braga at intervals matching the length of a day's journey, to stay overnight and/or to change horses. Like in any other major Roman Road, the *mansiones* and *mutationes*³ of *Via Antiqua* were more or

consists in placing the continents at the disposition of city people (...) On the other hand, there is also human activity: irrigation, construction of roads, bridges and dikes (...) and even everyday agricultural activity turn land into an unceasingly remodeled space" ⁷.

Mansio was a place to pass the night, isolated on the road, where travelers could stay, bathe and eat. Mutatio was an establishment, on a road, where travelers' cars changed horses. It was also possible to carry out minor repairs to the carriages (source: Alarcão, Jorge; e Barroca, Mário. Dicionário de Arqueologia Portuguesa. Porto: Figueirinhas, 2012).

less at the same distance from one another, divided the territory and helped to define the landscape. So, it is necessary to understand its importance in the present. According to the version of J. M. Roldán Hervás from the Antoinine Itinerary, published in 1975, *Via Antiqua* had the following mansions, starting in Braga⁴:

Bracara Augusta | Salacia – mile XX | Praesidio – mile XLVI | Caladuno – mile LXII | Ad Aquas – mile LXXX | Pinetvm – mile C | Roboretvm – mile CXXXVI | Compleutica – mile CLXV | Veniatia – mile CLXXX | Petavonivm – mile CCVIII | Argentiolvm – mile CCXXIII | Asturica Augusta – mile CCXLVII

The location of *Via Antiqua's mansiones* is controversial and, despite the absence of certainties on the exact location of all the *mansiones* identified on the Antoinine Itinerary, there is archaeological evidence that guarantees some confidence in the location of most of them. It will be in those places that the "windows" of the ongoing research will be done (see fig. 02).

Bracara Augusta (Braga) | Praesidio (Vila da Ponte, Montalegre) - mile XLVI | Ad Aquas (Chaves) - mile LXXX | Pinetvm (Vale de Telhas, Mirandela) - mile C | Roboretvm (Castro de Avelãs) - mile CXXXVI | Petavonivm (Rosiño de Vidriales) - mile CCVIII | Asturica Augusta (Astorga) - mile CCXLVII

The proposal of the research consists on the interpretation and analysis of the sharp lines that define those "windows", trying to understand for each one of them the strength and the role of *Via Antiqua* in the landscape. By doing so, one will be able to increase its flexibility and give room to its transformation and development, as a structural axis. It is an operative exercise that allows a better understanding of the dominant guideline of the territory and, through it, the shape of the territory itself.

Via Antiqua was part of the project for the organization of the territory at a bigger scale, having Rome as the centre. It represented, therefore, a structural axis that gave continuity and territorial cohesion to

⁴ Item a Bracara Asturica (Road from Braga to Astorga). In the Iberian Peninsula, despite some variations, the Roman mile is about 1.481 meters of lenght (1.000 passus or 5.000 feet), according to J. M. Roldán Hervás and Francisco Sande Lemos.



Fig.2 - Location of the proposed Via Antiqua's "windows", for the ongoing research - Source: Author, over the Mercatore Roman, Catalan Institute for Classical Archaeology Map, 2008; and João Fonte, César Parcero-Oubiña; José Manuel Costa-Garcia layout of Via Antiqua, 2017

distant places. That continuity was based on the road design, its shape, its materials and building technique which, throughout the years, formed a set of proximity/distance relations regarding the main line, which is *Via Antiqua*. One of the relevant features to understand the continuity of the road, are the singular points of the road, where tensions, crossings and encounters are created. Places where architecture gains a territorial dimension and a scale that allows the dialogue and the establishment of territorial relations apparently strangers to each other. Hence, the importance of doing a longitudinal reading of the road and the territory that it crosses.

Among all the unanswered questions, there are some that we would like to address. What is the quality of the project for *Via Antiqua*? Which elements give meaning to the territory and the landscape? Those elements could be the key to develop the territory and to understand it, at local and regional level. On the other hand, it seems very important to do a temporal analysis of the territory from the road, placing different entities and spaces in sequence. There is the possibility of *Via Antiqua*, as an urban and territorial fact, to define the urban and territorial form, associated to the road. That form belongs both to the city and to the territory – *Via Antiqua* marked as primordial crossing on the north of Portugal. So, one is interested to study the odds of *Via Antiqua*'s dominant direction to have had some sort of influence on other decisions about the form of the city and the form of the territory. In Roman times and in the present.

Each new urban and territorial element faces the original geometry of the road, even if it seems to be numb or invisible. If one is able to see the old road that way, it can give a further boost to consolidate the city and the territorial's potential, while playing a connecting role, of territorial cohesion and intermediation between the city and the countryside. In our point of view, this is one of the main features of an old road, like *Via Antiqua*. The space that it occupies ought to be seen as a container for possibilities, even more because of its elasticity, as an object that has transnational, national, regional and local dimension and value.

If the city and the territory need essential forms, like pointed out by Juan Luís Rivas-Navarro⁸ (infrastructures for the understanding), it will be needed to recognise *Via Antiqua* as an infrastructure to under-

stand and read the territory, regarding the set of relations of its layout and that the idea behind its original construction and, mainly, its future project is a good one, to enable functions as an economical and cultural booster and, above all, to connect the landscape. It is necessary to enhance social, cultural, patrimonial and economic development, through the urban and territorial forms included in the *Via Antiqua* system, yet to identify. All to transform the sublime gesture and the utopia of the Roman Road crossing, into a reality of the present and the future.

By the design and beauty of the road's project, which were underlined by Alberti and Palladio, one ought to create a new culture to reconcile the pedestrian and tourist city, the patrimonial and residential city, with the city of economy and services. A culture that allows the creation of synergies between city and territory. *Via Antiqua* as a representative line that supports the connection between different parts of the territory and that helps to define the landscape design of the collective imaginary.

So, the road is more important than ever, for its intrinsic character and responsibility to connect different places; for its conceptual meaning; for its consideration as place for social/public life; and for its capacity to link different times in the same territory. These distinctive characteristics of the roads are the various dimensions that one is interested in studying in Via Antiqua. First and foremost, the road is a founding gesture of culture. The first one that men had over nature, when started marking the paths along their way, trying to domain the natural space to find better places to live, to give some continuity to himself and his ideas, regarding the geographical basis that surrounded him. The road in a more archaic concept, as a track or a path, along which a given number of people move. This is a symbolic characteristic of the road, as it relies on the existence of tokens that signal the passage, like the church bell towers, the Roman milestones along the road, the presence of cemeteries on the outskirts of the villages, or the existence of physical evidences of the road, like bridges. These tokens are evidence of a path that "may well preexist the permanence of human settlements (...). From its inception, therefore, the road must have had both metaphoric and cognitive importance beyond its more obvious use."9

(Fig.04 – The chapel bells in Currais, Montalegre – Source: author) Like mentioned before, roads have several dimensions that define



Fig.3 - The Chaves' valley - Source: author



Fig.4 - The chapel bells in Currais, Montalegre - Source: author

them. We will use these dimensions as different chapters on the research, as they will help to answer the most important question facing *Via Antiqua* – What do we need the road for? The road contributes to the shape of the territory, the shape of the cities and villages. "It divides and organizes the territory, offering places to implement activities. It is a place to see and to be seen and a place where the city faces the territory and vice-versa. The road is an access to and a place to circulate. It has shape, depth and is a system. It is architecture, space with materials and building techniques"¹⁰.

The first level of interpretation of the road, is the territorial dimension. When one looks at the Roman Road Network (figs. 05), *Via Antiqua* is a line, traced to connect two points, Astorga and Braga, two major capital cities by the time of *Augustus* and, despite not being designed, is a project that was built and still remains partially visible. At that scale, it is part of a two-dimensional tissue contained in the Iberian Peninsula. However, the various lines/roads, complement each other and give meaning and continuity to the territory, because they are resilient objects, accumulate history and represent the essential form of the territory.

If one resembles the roads to lines, one should consider the creation of a directrix which can take the most out of the existing topography, whether in the lowlands and plateaus, where the road is a straight line, or in the mountain areas, where the road is winding. Those lines can help to build a very geographical landscape, in the sense that they follow the dominant directrix of the territory, by parallelism or not. Chaves, for instance, is a very good example of this, because in its valley, *Via Antiqua* crosses the existing landscape in a perpendicular way, regarding the natural directrix formed by the topography and the river Tâmega (see fig. 06). On the other hand, the set of lines defined by the Roman Road network can be perceived as an internal matrix that structures the territory. From a conceptual point of view, this internal matrix, with its full and empty spaces dialogue, can give some clues to perceive structures for the understanding of the territory.

The second level of interpretation is the road as an object and inhabited place. Roads are fundamental facts in architecture, in the sense that they could link and relate different periods, like proposed by S. Gideon¹¹. As they gain width or depth, the lines become architecture,

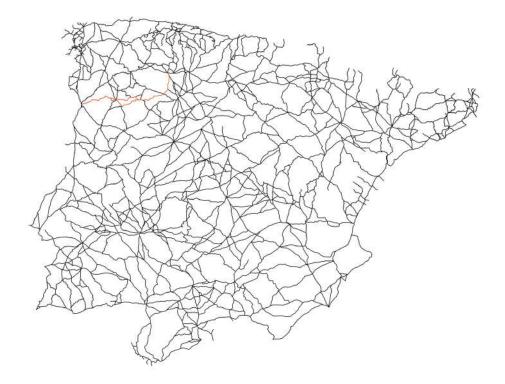


Fig.5 - The Roman Road Network in the Iberian Peninsula as a sum of lines - Source: Drawing by the author based on the map of Mercatore Roman, Catalan Institute for Classical Archaeology, 2008; and João Fonte, César Parcero-Oubiña; José Manuel Costa-Garcia, 2017

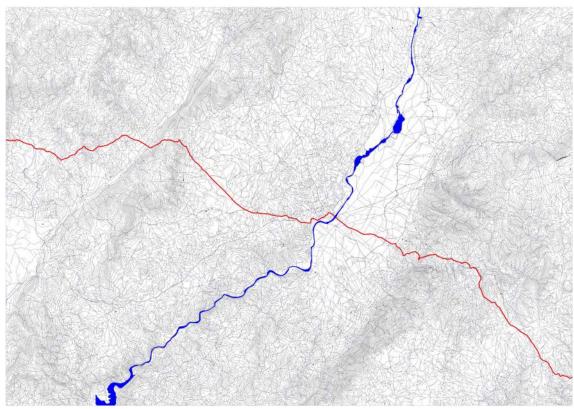


Fig.6 - Via Antiqua crossing the Chaves' valley- Source: Drawing by the author

because start to have inner space, slope, changes of direction, pavement materials, squares or crossroads, sections, plans, etc. The road starts to be a container as well, as it serves to support all the elements in the territory and in the cities, establishing relations with the surrounding areas and spaces, in the agricultural fields, in the forests or in the cities and villages. And, above all, the Road serves as a container for life and people.

The third level of analysis is *Via Antiqua* as a system and public place. The road as a combination of architecture, agriculture, heritage and cultural landscape. Ultimately, *Via Antiqua* is a Cultural Route, defined by its context, content, shared set value, dynamic character and surroundings. Cultural Routes offer a privileged framework that allow us to perceive "its use for such specific purpose throughout a long period of history and by having generated heritage values and cultural properties associated to it which reflect reciprocal influences between different cultural groups as a result of its own peculiar dynamics "12.

The fourth level of interpretation is the road as a composite and fragmented space. Unlike the idea of a strutured territory, clearly divided in cities and countryside – the two faces of the same coin, reality demonstrates that there is a continuum of urbanization and construction. It is interesting to understand how the road can operate within this unstable process of fragmented appropriations and representations. Hopefully, some of the examples to be studied in *Via Antiqua* will give some clues in this particular matter (Castro de Avelãs and Astorga, for instance). Álvaro Domingues points out the fact that there is no such a thing as a "whole" territory¹³. On the contrary, it is nothing but a work in progress, with several possible formulations and representations. So, in this diffuse occupation, the goal is to present one vision of this literary landscape based on our interpretation of the role that *Via Antiqua* can have in it, even if it is broken or invisible.

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Fig.7 - The Arquinho Bridge, in Possacos - Source: author



Fig.8 – Castro de Avelãs, near Bragança- Source: author

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Not So Terra Firma

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Abstract

This paper and presentation focus on issues of flow, movement, connec- tion, and predictability, in essence all the issues that the contemporary street looks to address, except that rather than asphalt, water is the medium of transport. In the Fall of 2020, I instructed a studio that was part of a "ideas" design competition sponsored by the Fatima bint Hazza Cultural Foundation, of Abu Dhabi. The studio for fourth year architec- ture students asked them to engage with issues, and design associated with providing education for children, and community, in a remote area of Bangladesh, an area historically and increasingly inundated by flood- ing. A situation where both access too and the reliance of a continued educational system are in jeopardy. The students addressed the problem in two ways: first working with the Bangladeshi architect Mohammed Rezwan who has instituted a successful "floating classroom" initiative, students were asked to design their own floating classroom, based on the vernacular boat building crafts of the region, rather than the schoolchil- dren walking to a fixed classroom, often flooded, the floating classroom would come to them. The next step in the studio was the design of edu-cational research center dedicated to finding regional strategies to miti- gate the unpredictable and not so, terra firma. The project site was remote, on the bank of a river prone to flooding. Students were asked to design and accommodate, normal, and 100- and 500-year flood condi- tions. Essential to the studio was also the engagement of "locally" sourced materials, and an understanding of the vernacular craft of con- struction. The primary focus on those materials liberated the students from the complexities, and the ignorance associated with using modern building materials and systems, allowed them to concentrate primarily on the potential and possibilities of the material bamboo that shares the structural characteristics of wood and steel.

Keywords

Predictability, Anthropocene, Infrastructure, Other.



Fig.1 - Student Work by: Sara Bokr and Nada Hussein Abdelmaguid

Introduction:

This paper focuses on the work and ideas of a fourth-year architecture design studio at the American University of Sharjah located in the United Arab Emirates during the Fall semester of 2020. The studio was dedicated to addressing ideas of permanence and predictability, ideas fundamental to architectural pedagogy and practice, and ideas increasingly challenged by Anthropocene. The work created was part of a regionally sponsored design "ideas" competition, organized by the Fatima bint Hazza Cultural Foundation, of Abu Dhabi. The format for the competition centered on providing ideas for the nation of Bangladesh as it grapples with the effects of global warming to its infrastructure in especially poorer and rural agricultural areas. Infrastructure and its increasing failings in its ability to provide education, education being critical for any hope of resilience, and at an even more basic level sustenance and livability. Lack of education and resources in the face of warming is making an ever-increasing number of Bangladeshis, climate refugees, as they are forced to leave their homes and land in one of the most densely populated countries in the world. The studio took on the challenge of providing education for children, adults, and communities in two ways. First building on the ideas and activities initiated by a local Bangladeshi architect, Mohammed Rezwan and the nonprofit organization, Shidhulai Swanirvar Sangstha, who have instituted a "floating classroom" program, in the Northwestern districts of Bangladesh, as a means of bringing education to children via the waterways using boats, rather than children coming to the classroom, the floating classroom comes to them. Second, in conjunction with designing floating classrooms, students were tasked with designing a research and education center on the banks of the Gumani river, in the Padma district of Northwest Bangladesh. The center would be committed to communal ideas of: building, agricultural, educational, and cultural resilience. The studio was contemporaneous with the beginning of the covid pandemic and gave the students an empathetic vantage point, albeit a privileged one, as their educational infrastructure was challenged, and ultimately patched together not by a hard infrastructure of concrete but the soft infrastructure of the internet. The goal of the studio was to expand the way students thought about making architecture, in a pro-

Natural Environment | Common Atmospheres in Tropical Climates



Wet Atmosphere



Fig.2 - Student Work by: Rand Ahmad Altobasi and Njoki Nyanjui

cess that evoked ecological holism, a holism that pushed against a purely anthropocentrically biased position, and asked students to consider the craft of thinking as well as listening.

Bangladesh:

From the view of a satellite Bangladesh has the appearance of a tapestry, interlaced patterns of land and water, frayed at its Southern edge where land and sea meet. Not far from Bangladesh's Northern border, sit the Himalayan mountains, whose glacier melt provide the sediments and silt that make the soil in Bangladesh fertile and productive. It is this glacial melt which conflates into a network, of what is estimated to be, between 250-700 rivers forming the threads of water and land in constant flux. The three main rivers of Bangladesh, the Ganges, (locally called the Padma) Brahmaputra and Meghna under "normal" conditions, absorb and distribute 1200-3000 mm of average annual rainfall, the majority which fall during the monsoon season between early June and mid-October. With river flooding comes the spreading of silt and sediment. Agriculture employs 43% of the countries 165 million people, and accounts for roughly 14% of its GDP. The Padma, Brahmaputra and Meghna rivers conflate just South of the capital city of Dhaka, with 21 million inhabitants, it is the fourth most densely populated city on the planet. From there the rivers begin their alluvial spread into the Ganges Delta, the largest delta in the world. It is the sediment carried by the flows of the glacier melt that through geologic time scales have formed the land mass that has become Bangladesh. Under the most stable of climate conditions the interplay between land and water is beneficial and productive to both the agriculture and the culture. There was an ebb and flow pattern to the rivers which historically enabled rural agricultural people to navigate and transport, linking to a modern land infrastructure, of roads and bridges emanating from and returning to Dhaka, at the nexus of these networks existed the potential for prosperity. Global warming has and will increasingly threaten those networks. In the North the melting of Himalayan glaciers, the increase and decrease of monsoon rain activity, and the corresponding rise in catastrophic flooding, and or drought have either washed away or dried out the soil's productivity. To the South the Ganges Delta, is threatened with sea level rise, storm surges and cyclones, which have not only

submerged land areas but also exasperated saline intrusion pushing North and overwhelming both agriculture and aquaculture. These were some of the challenges the studio faced as the students sought to find a means of resilience.

Pedagogy:

The Anthropocene:

A precarious situation arises when the networks, civil infrastructure, etc. predicated largely on a trust in the future, a trust historically built on the observable and empirically stable cosmology of the Holocene meet the Anthropocene. Predictability for my purposes, I will define as, when an object and its character can be understood in time, essential to this observation is the isolation of the object to be able to measure it against its context. The Anthropocene unlike the geologic epochs that preceded it, is the layering of the earth by uniquely human forces, the stratification of human productivity and waste, whether directly or indirectly, via activity on the earth's surface, in its atmosphere, its oceans, chemically and biologically subverting any conventional notions of boundary. The effects of the Anthropocene and its attendant humanness mix with all that it touches, blending takes place where it is increasingly difficult to distinguish between the natural and the artificial, furthermore the ability to isolate an object or event is problematic. To qualify and quantify a framework of understanding objects and subjects in the Anthropocene, Timothy Morton has written about the concept of "hyper-objects". Hyper-objects per his definition are "objects massively distributed in time and space relative to humans". Morton points to examples of black-holes, and the solar system, as non-human examples, but as the effects of the Anthropocene manifest, global warming, global banking systems, nuclear waste, and pandemics, to name just a few, are also examples of hyper-objects. Morton goes on to qualify hyper-objects as "non-local". The appreciation that the scale of the object can never be experienced in totality, any manifestation of the hyper-object is not the sum-total of the object. Hyper-ob-

Timothy Morton. Hyperobjects- Philosophy and Ecology After the End of the World. (Minneapolis: University of Minnesota Press, 2013) p.38



Fig.3 - Student Work by: Marawan Mazen Mahmoud and Hind Abusnana

jects he states are "viscous". 2 Sticking and enmeshing to the beings and entities involved with them. Through Morton's ideas of "hyper" "viscosity" and "non-locality" it becomes clear that we cannot easily make the distinction between what is human and what is nature, nature for all intents and purposes has become contingent and emmeshed in human presence, and vice versus nature is emmeshed in human. When boundaries become porous establishing self and other distinctions becomes interesting, and as a result, questions of autonomy historically so important to creative thought become increasingly problematic when the world we perceive is authored and or engineered. On the one hand it is a deeply troubling prospect, the idea that even in the deepest wilderness one cannot experience something uniquely other, something that does not carry the human imprint, on the other hand there is something hopeful about imagining a world that questions the split into the human/ nature, self /other dichotomies, suggesting instead a non-hierarchical, non-anthropocentric ecology. Ironically with the advent of the Anthropocene there has formed a realization of the problems and limits caused by anthropocentric thinking.

There is an anecdote about the abstract expressionist painter Jackson Pollock, important in art history for literally and figuratively inserting himself inside the canvas, while making his action paintings, Pollock was asked by the artist /educator Hans Hofmann, after seeing one of his action paintings, why he (Pollock) did not paint from nature, Pollock's response was "I am nature". The dissolution of the idea "nature" as something "other" presents the possibility a positive transition both aesthetically and existentially. Aesthetically because while the distance separation between subject and object, can never be completely reconciled according to Kant's ideas on correlation, Timothy Morton points out, in that the aesthetic experience, a tuning between subject and object occurs, in the past while nature was still considered as other, the tuning was largely the other tuned to the frequency of the subject, a

² Timothy Morton. Hyperobjects- Philosophy and Ecology After the End of the World. (Minneapolis: University of Minnesota Press, 2013) p.38

³ Gail Levin. *Jackson Pollock and Lee Krasner A New Concept of Nature*. Ritsumeikan Studies in Language and Culture, Vol. 24, No. 3, 2013 p.29

hierarchical and one-sided anthropocentric operation. When distinctions between self and other are dissolved and the two become emmeshed, the possibilities for a tuning that awakens the object as well as the subject arises. ⁴

The other potential that reveals itself in the 'end of nature' is an existential prospect. Using the normative hierarchical concepts of nature as 'other', humans are exhausting nature, which includes human nature to the point of extinction. In a twist the Anthropocene by blurring distinctions and boundaries between self and nature, emmeshing the two in a non-hierarchical ecology, now less about compatible co-existence and more about mutually shared destruction is opening the idea of a non-one-sided dialogue, an existential communication built on co-existence that perhaps pollyannish becomes more about listening.

There is a peril and promise, to the condition that begins at the end of nature, there is the peril, very real and seemingly becoming truer every day that our actions, evidenced in the Anthropocene will overwhelm us, that we will in essence super saturate the world in an entropic extinction. This is very apparent in Bangladesh, where the entire infrastructural system is becoming non-isolatable, essentially subsumed, and increasingly indistinguishable from the environment around it. Simultaneously there exists the promise, to understand and more importantly engage this ecology better and liberate existence holistically. With the end of nature there begins a new ecology in the age of the Anthropocene, Jedediah Purdy called our ability to navigate this new ecology "environmental imagination".5 There is nothing new about the idea of environmental imagination, as Purdy describes it has always been the basis for history, ideological, and theological, to navigate the climate and cosmos, the difference now is the ability to predict, to use imagination as a means of engagement rather than isolation from the events we are part of.

⁴ Timothy Morton. Humankind – solidarity with nonhuman people. Brooklyn: Verso Books, 2017. pp.6–10
5 Jedediah Purdy. After Nature–A Politics for the Anthropocene. (Cambridge: Harvard University Press, 2015) p.6

Weaving:

The analogy of weaving is the craft I used most often in studio to describe the possibilities of "environmental imagination". In conventional pedagogy of architecture, the building is designed from the ground up as a system and series of "joining's" in the tradition of Gottfied Semper's definition of tectonics. These joining's at least in the primordial context of Semper's "Four Elements of Architecture" as described by Kenneth Frampton, 6 arise out of the ground and context, in a way in which a reciprocity between the figure "building" and the ground, context (topography, climate, geology), existed, there was both imaginatively and physically a weaving action, in such a porosity existed between figure and ground which hierarchically emphasized neither, while celebrating both. While the concept of joining in architecture is still relevant, it has become increasingly a bounded interface, stopping, and more importantly isolating at the foundation, walls, and roof of the building, effectively hermetically sealing the building from ground and climate.

Field Conditions:

Art and music have historically shared the dialectic between figure and ground but were able to get beyond a hierarchy of distinction as evidenced in the work of the abstract expressionists, and later the minimalists. Music and the work of John Cage challenge the idea that the interval between notes (figure) and time (ground) need not be distinct from each other. Cage's 4'33" composition makes that abundantly clear by composing a start, (keyboard lid being opened), expectation, (music will be produced), interval (the ambient cacophony of sound, noise, and silence), finish (keyboard lid being closed).

Architecture with its increasing reliance on isolation, hermetically sealed and conditioned space has for the most part gone the opposite direction. There are certainly many notable architects working to break down boundaries of isolation, Francois Roche, Kersten Geers and David Van Severen, VenhoevenCS, and Kiel Moe to name just some, but by in

⁶ Kenneth Frampton. Studies in Tectonic Culture: The Poetics of Construction In Nineteenth and Twentieth Century Architecture. (Cambridge: The MIT Press, 1995.) Pp.5-7

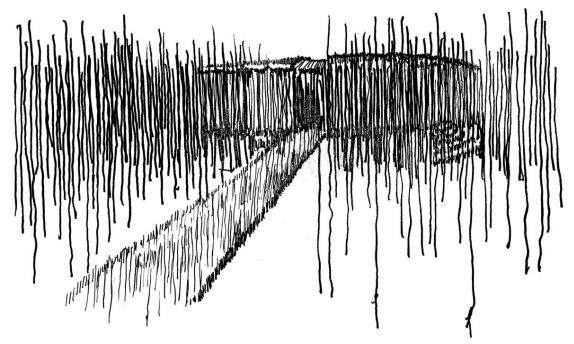


Fig.4 - Student Work by: Sarah Al-Dulaimi and Nadin Tarek Abdelfatah

large architecture and architectural pedagogy still pursue the conventional course of a hierarchical figure ground relationship.

The concept of a "field" first appears scientific thought as fields of energy, gravitational fields, magnetic fields. Stan Allen's 1998 essay "Field Conditions" brings these ideas to architectural pedagogy. "Field configurations are loosely bound aggregates characterized by porosity and local interconnectivity." Form matters, but not so much the forms of things as the form between things." ⁷ By reading the essay and employing its ideas as a strategy for site analysis, and ultimately design, the pursuit of "field conditions" presented a "woven" way of conceiving of the figure (architecture) emerging out of, rather than positioned onto the ground (site). Using processes of abstraction, mimicry, and representation the studio examined scales of interaction in textures and rhythms, from the local to the regional where the economies of material labor and transport became part, to the global where geopolitical ideas arose.

Resilience:

Another important issue to the studio pedagogy, and arising out of concepts of field conditions, was the idea of resilience. Resilience is for the purposes of my argument, a way of binding a structure, or an aggregate of joining's, a weaving into field so that it better able to deal with the unpredictable. Sustainability is a word that is most often used in any discussion of ecology, but sustainability for my thinking implies that we are trying to sustain something, a way of life and industry, of which the self-other, or more pertinently the conception of nature as 'other' is fundamental. Survivability is another word that is in use to describe agency in the ecology of the Anthropocene, but survivability while possibly an accurate assessment of the climate disaster, is nevertheless like the idea of sustainability, and has a connotation of 'nature as other', in this case like a millennia ago, when nature and fear were largely synonymous. Resilience is a way of bending without breaking, maintaining pliability in the face of forces, the forces of ecology not

⁷ Stan Allen. *Points and Lines.* (New York: Princeton Architectural Press 1999.) pp. 92-93

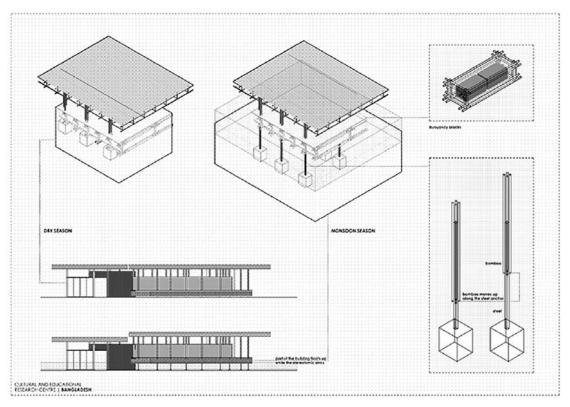


Fig.5 - Student Work by: Sara Bokr and Nada Hussein Abdelmaguid

static but dynamic. These forces as in the case of the studio project manifest in the form of local catastrophic flooding which like Morton's hyper-objects may appear locally, but cannot be understood locally, they are part of a vast web of interconnected systems natural and artificial. The architect educator Kiel Moe in his essay "Building Agnotology" takes on the issue of architectural knowledge its acquisition, localization, and ignorance: "The very aspect of architecture structure-that literally couples building, through its foundations, to the planet. Structure was long abstracted and taught such that its bulk materials and systems were literally not connected in other ways at the scales of construction ecology." 8 As an example of this, Moe points out the disparity between the rural extractive zones and communities that surround them, from which structural materials are taken and which end up themselves structurally undeveloped, unstable, socially, and environmentally, and the urban zones to which the materials are exported which are structurally overdeveloped. As he observes it is ultimately part of the structural ecology that we consider "foundation" but nevertheless dissociate in teaching, in favor of the accepted vocabulary of statics and loads. To understand and design the foundation and for that matter the building it essential to see the foundation and building materials not in isolation but as part of an ecology, economy and politics that is woven into and out of any material selected. The complexity and ignorance begin with any material/ system selection, when we view materials in isolation, no longer seeing or willfully ignorant of connections to the broader ecological fabric.

Methodology.

The Boat:

During the first 2 weeks of the studio students were asked individually to design floating classrooms. Students incorporated the basic design specifications for classroom boats from the floating classroom program and were asked to design their own floating classrooms. The program for the floating classroom was of student initiative, but asked

⁸ Kiel Moe. *Building Agnotology*. Journal of Architectural Education, 74, no 1, March 2020. pp. 10–12



Fig.6 - Student Work by: Niha Ali

them to consider traditional models such as, classroom, library/ reading, science lab, art room, playground to name some. While a basic understanding of river dynamics and navigation was important, the key understanding for the students was buoyancy, how a foundation in this case a boat could respond to changing conditions of flow and height, simultaneous to river dynamics are the tectonics of the boat itself. Tectonics has been defined as "the art of joining's" and central to this argument is the importance of the knot and weaving. Joining, knots and weaving in a building continue from roof to foundations relying on the resistive force of friction to achieve relative stability. A problem is encountered in boat tectonics though the loss of frictional joining at the water line. This paradox, along with the studies done around "field conditions", presented to the students the first opportunity to engage with the idea of the site as not static but fluid in nature. This analysis and understanding, would become essential for the next phase of the project.

The Research Center.

The Program:

The site program was subdivided into 3 primary interwoven issues: the building architecture, the landscape, and the waterscape. The program for the research center was dedicated to resilience in the flood vulnerable agricultural regions of Bangladesh. The objective was to provide a resilient location for the communication and dissemination of ideas on education and community in general, and practices for adapting to global warming. The building spatial program was intentionally straight forward, a gallery/ lecture hall, conference room/ library, research laboratory, administrative offices, restrooms, and a maintenance shop. The landscape program added outdoor space for a plaza, a small parking lot, agricultural research, and garden space. The seam where land and waterscapes meet were investigated as a place for the introduction of "sorjan farming" which share similarities to the Dutch "polder" in that the land rather than stopping at an edge, stiches or weaves itself into the water. In sorjan farming the land is both dovetailed into water and raised above it is creating trenches of water that surround the pod of land. On the land pods, crops can be grown, and in the water trenches, aquaculture can take place. The river also presented the opportunity to research and design "floating gardens" that is gardens constructed to float made from the weaving of water hyacinth roots, a naturally occurring river-based plant in Bangladesh, bamboo, and then topping with soil and plants being floating the gardens can sensitively adapt to river changes in flow. A dock for the mooring of the classroom boats, and a maintenance shop dedicated to their upkeep and construction was also part of the waterscape program. While there was a required land based "front door" to the project, arguably the most important entry access to the project was from the river and dock.

The Site:

The project site is located on the Gumani river, a tributary of the Bhramaputra river at a location just Northwest of the confluence of the Bhramaputra and Padma rivers. The site is accessible by roads from the small city of Bhangura, allowing the project some of the amenities and communication provided by cities, but for the most part the primary access to the site was from the river. The project is completely off the grid, so students were tasked with providing their own power and plumbing. The building itself could elect to be on land or in the water, but either way it was required to operationally adapt to the water levels of a 500-year flood, meaning foundations and connections between land and water had to address the dynamics of buoyancy and change.

Material, Structure, and Logistics:

A variety of materials and systems were employed but the most important consideration for the students was to consider their source, so while "locally sourced" became an operative calling, students were encouraged to look at broad range of materials from the vernacular to the modern, of primary importance was where the material was from, how it was manufactured, how it could be constructed, how it could be maintained, and how it could be transported. One student took on the challenge of finding salvaged lifeboats from a yard in Dhaka, she then figured out how the boats could be floated to the site repurposed, typically by cutting in half and anchored them in a vertical format.

Of all the materials the use of indigenous bamboo used individually,



Fig.7 - Student Work by: Afra Obaid AlFalasi and Maitha Jasem Alhammadi

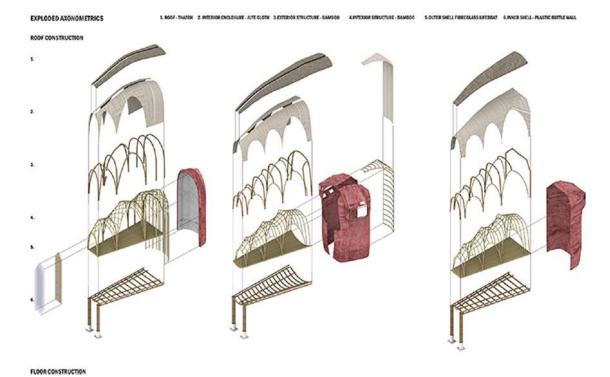


Fig.8 - Student Work by: Njoki Nyanjui

aggregated, milled and un-milled was common to all the projects. Pedagogically the primary focus on one material liberated the students from the complexities, and the ignorance often associated with using modern building materials and systems, allowed them to concentrate primarily on the potential and possibilities of a material that shares structural characteristics like wood and steel, and at the same time gave them insight into the logistics, production craft, maintenance, and transport.

Climate Systems:

Climate and more specifically working with, as opposed to 'climate control' were emphasized, as such the conventions of a hermetically sealed building were dispensed of in favor of exploring the potentials of vernacular and contemporary practices of building climate response. Rainfall, humidity, and high and low temperatures were all considered, but partly because of building material selection, and partly because available power sources, students avoided using active contemporary thermal systems and controls, in favor of passive strategies. Several active power generation systems were explored including, solar, wind power, and hydro power, but these systems were required to sublimate not replace the passive qualities of, wind, shade, and landscape.

Conclusion:

This studio was importantly about reexamining and engaging a connection to the ground, by which is included the climate atmosphere. The United Arab Emirates shares much with Bangladesh regarding a topographical relationship to the sea, most of the country is not much higher than sea level. If current estimates to sea level rise here prove accurate, and there is little reason to doubt, the water will rise between 0.5 and 2.0 meters by centuries end. Until only about 50 years ago there was a strong nomadic presence here, a culture dedicated to adapting to the extremes of living in a hyper arid region, adapting by temporal seasonal adjustments in location, modernization has here, as everywhere, favored a contrasting form of settlement based on isolation from the ground. Cities in this region have exploded in size and magnitude of endeavor. Buildings and streets incorporate all the latest systems and technologies regarding hermetically sealing the buildings

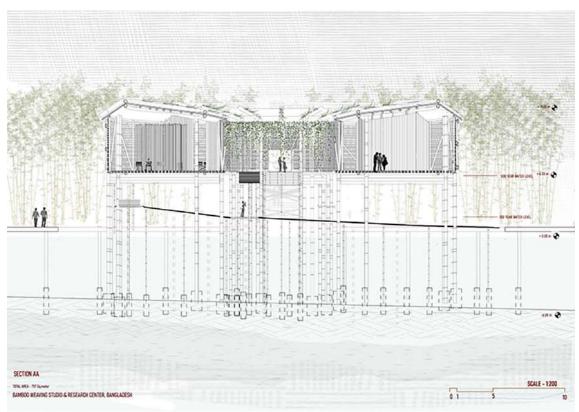


Fig.9 - Student Work by: Amerah Bint Ayaz Khan and Archa Varghese Alukka



Fig.10 - Student Work by: Sarah Al-Dulaimi and Nadin Tarek Abdelfatah.

from climate, and infrastructure from terrestrial dynamics. Students at the American University of Sharjah seasonal exposure to ground and climate is largely determined by climate afforded to them by air conditioning, and ground, through automobile and road. Students and faculty of architecture, here as everywhere are dealing with a ground condition very different than the one from a generation ago and it is essential that the architectural pedagogy responds.

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Former railways, from un-planned obsolescence to re-use. Eco-logical infrastructures between architectures, cities, and territories

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Abstract

Often characterised by rapid and inevitable processes of obsolescence, the railways of the last century are increasingly finding themselves as disused lines that emerge as thick filaments of the so-called 'third landscape' between the architecture of 20th-century cities and the urban agglomerations of contemporary territories. Among the disused 'in-between-structures', the former railways seem to be a singular field of investigation, apparently prepared to embrace the demands of the current ecological emergency. The disused urban railway systems, and the abandoned green micro-systems connected to them, are recognised as having transformative potential which, if interpreted, seem to favour their re-conversion into possible eco-logical public spaces for cities and communities to come. Starting from the reinterpretation of projects and processes of reuse of disused railways - identified between West and East - and of pieces of fenced city connected to them, the contribution intends to investigate and put in tension logics and approaches for the reuse of these particular 'obsolescences' of the present time, highlighting local specificities in response to global issues.

Keywords

former-railways, ecology, abandonment, reuse, green

In this contribution, studies and research on the state and fate of some abandoned structures and infrastructure are condensed. The focus is on one of the abandoned systems studied in the context of a more general research, still in place, which is questioning the possibility of action of the Project of Architecture for the reuse of discarded spaces, in reference to ecological issues. The paper is meant to look at

the fate and investigate possible developments for an exceptional obsolescence of the last century: the former Alifana railway, which crossed the Campania landscape, reaching the edge of the city of Naples in the 1900s. From a methodological point of view, starting with a reconstruction of a global and Italian state-of-art, processes of reuse and conditions of abandonment of other railway infrastructure identified between East and West are looked at and investigated. The aim is to extrapolate elements and modes of action of the project for possible comparisons and to collect data that, by analogy or difference, contribute to the identification of design strategies for the study case.

Mobility infrastructure, inherited from the 20th century, has been marked frequently - and often very soon - by major obsolescence, especially in those cases where the improvement of other lines, faster and more technologically up to date, has led to the forgetfulness of others, almost always the 'minor' ones. Forgetfulness generally causes and drives obsolescence, is here looked at and analysed as the effect of those processes that have affected infrastructure on iron of the twentieth century and urban architectures connected to them. The definition of the word 'obsolescence' shows a strong link with the world of technology and innovation: the loss of efficiency and economic value resulting from technological advances is caused by the introduction of new 'machines' that are more competitive than the previous ones. The forced and programmed obsolescence that the world has known with the big digital brands, the one closely linked to the technological race, is actually only the tangible extremism of a metabolic process that physiologically has invested and still invests, with different degrees of intensity, our lives and, with them, also the cities that we inhabit. Today, in fact, entire parts of the consolidated city are crossed, marked, and characterized by infrastructure, in use and in abandonment: more and more infrastructure landscapes, 'infrascapes', that require the Architectural Project ways to look new to rethink the places of abandonment. In recent years, Europe and the world have responded to these abandonment processes with some re-use projects that seem to interpret, in distant ways and contexts, possible new meanings for disused iron infrastructure.

Today, more and more cities, and the city project, are called to find local answers to global challenges such as global warming, deforesta-

tion processes, water rise. In this sense, the former railways are presented as a unique field of investigation compared to other disused architectures. In fact, they seem apparently 'ready' to introject, through reuse, some instances imposed by the current ecological emergency. In some abandoned urban railways and in the residual spaces connected to them – often strongly characterized by the presence of 'green' – a transformative potential is recognized that if reinterpreted, it seems to favor their conversion into possible eco-logical spaces for the cities of the future.

Provare affetto per oggetti, edifici e luoghi è nella nostra natura. Li apprezziamo per i ricordi e le idee a cui li associamo. La protezione e la cura del patrimonio storico fa parte integrante della nostra immagine della condizione umana. È il modo in cui celebriamo la continuità dello sforzo dell'uomo e il costante desiderio di migliorare il nostro grado di civiltà. [...] Ciò che abbiamo ereditato dev'essere compreso e curato non solo come testimonianza storica, ma anche come una fragile ecologia del nostro mondo costruito e naturale.²

Infrastructures and the city, an Italian scenario.

In the changing landscape of contemporary infrastructures, architects and landscape architects have increasingly been confronted with the complex legacy of former railways. In Italy, unlike other contexts, it is difficult to see how reconversion and reuse processes have affected former railways. A large part of our country is innervated by disused railway lines, about 7000 km of abandoned tracks that often cross some of the most significant areas of the Italian landscape. In recent years there has been a renewed interest in the historical railway heritage, which, in the wake of what is happening in many European countries, from Spain to the United Kingdom, in America and the East, is to be recovered in various ways, ranging from the reactivation of some tracks for tourism to the creation of greenways and the possible transformation into soft mobility. Since the early 2000s, a 'deviation' on the theme of railway track recycling has been visible in Italy. In 2003, the exhibition L'Architettura del Mondo. Infrastrutture, mobilità, paesaggi — curated

by Alberto Ferlenga for the *Triennale di Milano* – investigates the role, status, potential and possible destiny of today's infrastructures, focusing on Italy. In addition to its undoubted and considerable cultural value, the research group's experience at the beginning of the century, which has been brought together in a dedicated volume¹. This experience tells of the need for a dialogue between Design and Research in Italy and the world of infrastructures. A complex dialogue, which has often clashed with economic, bureaucratic, and urban planning limits, and which until now has given rise to sporadic reconnaissance rather than to the creation of networks of structured and shared interests and investments.

Le infrastrutture, e in particolar modo quelle legate al movimento di persone o merci, hanno fortemente connotato il corso del Novecento diventando un simbolo di modernità, uno degli indicatori più importanti per valutare il grado di sviluppo di un paese. [...] Alle infrastrutture odierne si richiede di farsi portatrici di valori non legati esclusivamente ai ruoli funzionali primari, di offrire possibilità d'uso diversificate, di essere permeabili nei confronti del territorio e di costituirne un'occasione di riqualificazione, riconoscibile e condivisa.³

In this sense it is important to emphasize that, at least in the Italian scenario, to a fervid cultural interest – which has often led to the elaboration of atlases and reconnaissance manuals dedicated to the abandoned railway heritage⁴ – there are unfortunately few scattered projects and re-use processes.

Infrastructures and the city, state-of-art and open issues.

The contemporary infrastructure, the roads as well as the rail-ways, for the increasingly faster pace of travel and for the increasingly advanced techniques of construction of paths that overcome geographical "obstacles", bypassing them, or passing them, appear

¹ We refers to the book: Ferlenga, Alberto, L'Architettura del mondo. Infrastrutture, mobilità, nuovi paesaggi, Milano, Compositori, 2012.

almost always as seemingly unrelated to the context. The more specialized the type of traffic on a route, the less the relationship that the infrastructure establishes with the territory it crosses. Thus, a rural road describes in detail the agricultural territory showing types of crops, irrigation channels, intersections with other paths, small architectures, etc. while a stretch of highway that runs alongside the same territory only allows you to perceive that it is an agricultural territory. In an even more evident way, a high-speed railway line allows the travellers to perceive almost nothing of what he is going through; on the other hand, a railway line of regional importance establishes numerous relations with the territory both physical, due to the presence of many stations, both visual, given the very slow travel times. Often these infrastructures affect a moment of construction of the territory - in Italy as well as in other nations - in which the relationship between large cities and inland areas has changed. As was written just now, at the beginning of the '900 Italy has a dense network of infrastructure that quickly reached the smaller centres. In less recent years there has been a new concentration of interests on the big cities, a new inequality has been generated, which sees the increasingly dense and inhabited cities and the increasingly distant countries. The result is that these countries are depopulated more and more, the inhabitants go towards the big cities and the lines are dismantled: 'another Italy' is cut off more and more.

Il paesaggio italiano, uno dei più belli, visitati e decantati del Mediterraneo, è oggi oggetto di attenzione non solo per ciò che concerne questioni ormai annose quali la salvaguardia delle coste, delle bellezze naturali, del patrimonio storico e monumentale, dei servizi ecosistemici, ma per una questione nazionale che riguarda una cospicua porzione di territorio, quello delle aree interne a rischio di spopolamento e abbandono, un "territorio-margine.⁵

Infrastructures and the city, times in comparison.

As just mentioned, throughout the last century the railways have favoured the development and transformation of the territories we live in, contributing to the mutual processes of urbanization and depopulation of parts of our territories and entire cities. Compared to the long

infrastructural filaments that intersect the hinterland, often place of conversion projects in greenways and cycle paths the contribution observes stretches and parts of abandoned railways in close relationship with urban tissue. The observed railway systems, which find themselves discarded in the contemporary city, are part of the natural processes of transformation and construction of the city within itself. It is the contemporary city that abandons things and that with time goes towards others. The result of these processes, many of which are still in progress, is the city that we live in, which is often, in the suburbs more than in the consolidated centres, the city-of-waste. Bauman in Vite di Scarto⁶ gives a definition of the term 'waste' that looks at the mechanism by which a waste is produced: through the clarification of a principle an action of subtraction of matter is determined that leads to "beauty", to "perfect", to the "finished". Bauman uses the description of an artistic process, that of Michelangelo, to describe what he defines as the precept that would have guided modern creation. A 'liquid modernity' in continuous evolution and, consequently, in continuous production of waste. Today the city-of-waste crosses the peripheries of almost all the European metropolises: suburbs increasingly connected to the city centres because of the recent phenomena of urban expansion. These are therefore urban suburbs, almost 'generic'2, which present several and interesting analogies even if observed in distant contexts: among these the prepotent presence of transport infrastructure, in use and abandoned.

Infrastructures and the city, layers in comparison.

In recent years there have been some participatory processes and bottom-up initiatives that tend to reconsider the heritage of abandoned and abandoned railways: in Italy the Historical Railways Foundation of the *Ferrovie dello Stato* has been established, together with numerous associations that promote the reuse of short sections of the paths at festivals, events, etc. As mentioned, the contribution does not look at the pieces of railway in the landscape, but at those abandoned infrastructural features that enter the urban fabric. Having to redevelop a

^{2 2000,} R. Khoolaas, Junkspace, in Oma@work, "A+U"special issue.

piece of railway that enters the city involves a reasoning capable of working to confirm the empty space but aimed at making a system that can regenerate eco-logically that piece of city. Today these filaments of 'third landscape'⁷ are made of boundaries and fences, scattered elements and artifacts that resist the time of abandonment and very often are characterized by a large presence of residual green. For these particular types of spaces, it seems unthinkable to overwrite a finished and completed project. More and more often, in fact, reuse and recycling projects work with time: an example in this sense is the winning project for the redevelopment of *Scalo Farini* in Milan.

In a moment of dramatic environmental transformation and permanent economic uncertainty, our priorities have changed. The most valuable currency is no longer 'brick' – the built – but rather the climatic conditions that cities will be able to provide and ensure for their citizens. The city of the twentieth century, with its high energy consumption, must be overcome by reconsidering the principles that have marked urban development since the classical era.³

The group led by Rem Khoolaas, in fact, uses time as a resource of the project signed OMAgroup in 2019. The foundation of the project is the hypothesis of working for stages of reuse: to a Phase 0 that sees the construction of a temporary park, follows a Phase 1 in which through cultural development and social activation will provide for the reclamation of waste places. At the end of a 5-year ecological cycle, the following phases, Phase 2 and Phase 3, will begin, which will consist in the realization of the most consistent equipment and architectures of the new *Parco Agenti Climatici*. At the end of the project process, the plan is to create an ecological park⁴ of 271,115 sqm, capable of returning many urban wastes to the city.

The research that has been carried out has evidenced how the first urban railroads on which they have begun to work, the first ones sub-

From the OMAgroup website: https://www.oma.com/projects/scalo-farini

In addition to the natural reclamation of Phase 1, the park once completed, will clear the air and water of the project site

tracted to the endless time of the abandonment, are railroads that are on a different layer regarding that of the city. These are real elevated roads, which take place indifferent to the built. The investigated projects, in fact, find themselves confronted almost exclusively with the infrastructure. To be ignored in these projects is the city lapped, unless sporadic connections and interesting points of view with the city's intercepted pieces. In this sense, the project for the New York City High Line, inaugurated in and still in partial processing, is an example. Globally known as a reuse project for a former infrastructure, the High Line project in fact, in addition to almost totally ignoring the urban context in which it is inserted, does not even look at the infrastructure building. The project does not start from the city, not from the material and physical consistency, but moves from an aesthetic vision, offering a new perspective: an elevated green space imagined in a city yet to be built. The foundation of the project is a park aesthetic based on the relationship between a horizontal green plane that frames, in an unprecedented way, a vertical urban landscape: one of the foundations of the global success of the less recent Central Park. The process that led to the conversion of the former railway that served downtown Manhattan has for years been a reference in the world for projects and reuse processes, some of which seem to exceed the limits and criticalities just mentioned. In 2016 Sergi Godia and Ana Molino designed the linear park of Rambla De Sants in Barcelona. The park design recovers an over discarded and unused infrastructure, with expedients and project actions that did not require large investments. The linear park can be considered in all respects the High Line of the 'less well-off'. Of great interest are the materials used - all industrial and construction waste materials - and the ways in which the design of the park manages to solve significant elevation jumps that its placement on a raised layer involves. To be recovered are mainly the spaces of the above infrastructure results in the part where the subway, in that point, comes out above ground. The Rambla de Sants is a park built from below but that is positioned on a layer apparently independent from the urban one, at the top, looking for visual connections, more than physical, with the city. The echo of the High Line in recent years has also reached more distant latitudes: we talk about the Bloomingdale Line in Sydney, as well as the Lutsingel Bridge in Rotterdam. 2017 is the project signed



Fig.1 – Assemblage of some project of re-use for former railways and highways in West and East – Source: Giuseppe D'Ascoli 2020

MVRDV for the Seoullo7017 Skygarden located in the heart of Seoul. The project of the Dutch group⁵, a plant village realized on a former innercity highway in an ever-changing urban area, reuses and reconnects parts and pieces of abandoned or rejected cities. On the other hand, the project, in addition to being difficult to define as a real park - in fact the green and contained if not forced into flourishing prefabricated overwrites a language that takes place indifferent to buildings and different pieces of city that meets. For a long time, the lines of mobility have turned out ignored and ignorant in the body and on the margins of tracks of cities now consolidated, expression of a necessary and useful progress, and therefore you are supported and supported even where there are enclaves of degradation and fractures. Today the attitude begins to be different or could be different if you look at another, able to go beyond, recycling and reuse processes based on a quantitative ecology, that rarely generate an effective reappropriation by the community of the space of infrastructure.

The former Alifana, a railroad in Naples' body.

In 1888 the town of Caiazzo was 'spokesman' for the need to build a railway that joined the area at the foot of the Matese with the city of Naples: an infrastructure that would serve the rural villages that were forming in the Neapolitan countryside at that time. The request was supported by several municipalities, including Marano di Napoli, Miano, Secondigliano. In 1898 a project was presented to extend the tramway Naples – Aversa to Piedimonte Matese, then called Piedimonte d'Alife, but only in 1900 by royal decree was granted to a French company the construction and management of the railway Naples – Piedimonte d'Alife. Inaugurated in 1913, it was closed for the opposite reasons, one might say, compared to those that generally led to the decommissioning of the small Italian railways. For the Neapolitan one it has been the conspicuous urbanization of the crossed territories above all in proximity of Naples, to render inadequate the type of transport. In fact, already from the construction the line consisted of two

⁵ More project details available on https///www.mvrdv.nl/projects/208/seoullo-7017-skygarden













Fig.2 – A composition of satellite images of the 'wasted' architectures and spaces still recognizeable along the Alifana railway line, taken from Google - Source: Giuseppe D'Ascoli 2020

diversified sections, the low Alifana, up to Santa Maria Capua Vetere, and the high Alifana up to Piedimonte Matese. Today the high Alifana is still in operation while the low tracks, streetlights, underpasses, tunnels, bridges resist as isolated and disconnected tracks in the densely heterogeneous urban fabric of the Neapolitan suburbs.

It is possible to retrace and redesign the old route of the low *Alifana* recognizing and tracing the structures and infrastructures that in the time have bundled along the line when it was in operation. A succession of large fences: industries, total institutions, cemeteries. The state of these structures is heterogeneous as well as their contextual condition, but all, both abandoned structures and those in operation, are structures rejected and forgotten by society, waste of our time, all characterized by the large presence of residual green. A 'constellation' made of large waste elements clearly diversified and that differently relate to the abandoned spaces of the path of Alifana. Some ignore the passage, such as the abandoned cemetery of Aversa, while others partially reuse the residual areas; it is the case of the green areas equipped with sports fields at the limits of the historic centre of Lusciano. In Naples East, therefore, at the edge of the consolidated urban center, along the route of the former Alifana railway, in particular in correspondence with the initial stretch that from Piazza Carlo III went up towards Secondigliano, along the West limit of Capodichino, there is a continuous layer, uninterrupted and basically flat; more or less thick fragments of 'third landscape'. A layer characterized by the presence of residual green in a state of partial or total abandonment, 'shelters' for diversity as Giles Clement writes; a geography of abandonment that stretches, jumps, stops, opening to unexpected places of waste.

Fragments in continuous succession that creep like a gap in the textures of the urban fabric. To the layer of the residual green, it joins and, in some cases, overlaps, interrupted by sudden jumps and light fences, a system of small and large waste. The wastescape city, a rejected city, that of automobile cemeteries and pottery dealers; the city of fences and elevated infrastructure. Within this network of waste and green areas are embedded three structures abandoned, inaccessible but surrounded by greenery, potential new centralities for Naples East: the barracks *Boscariello* Secondigliano, the *Leonardo Bianchi* and downstream, near the ancient Neapolitan terminus of Alifana in *Piazza Carlo III*, the *Redaelli* industrial plant.



Fig.3 – A bridge of the former Alifana railway, next to the Capodichino stop; demolished in 2020 – Source: Giuseppe D'Ascoli 2019



Fig.4 – On the left, photos of some 'built' traces of the low Alifana; on the right, in black, a 'constella-tion' of wasted architecture along the railway line – Source: Giuseppe D'Ascoli 2019

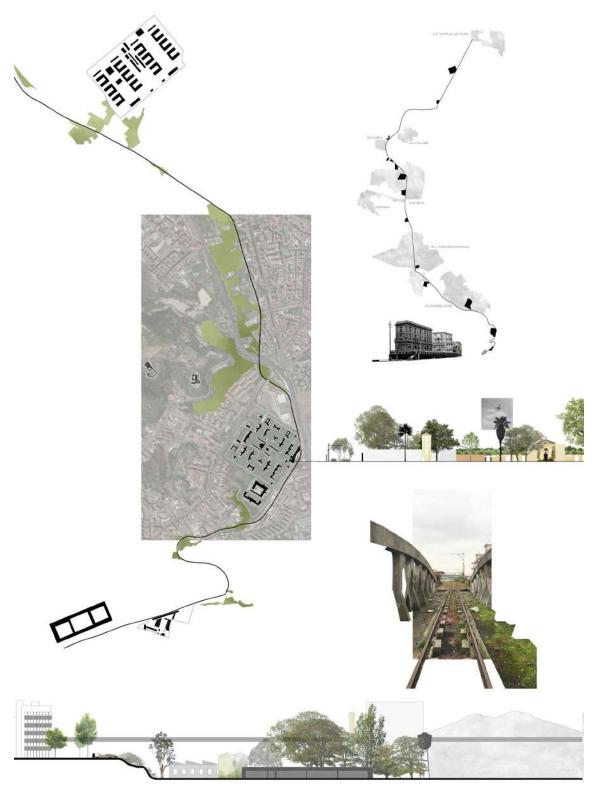


Fig.5 – A composition of photos, sections and drawing which underlines the relationship between what lasts out of the former Alifana railway and the city lapped by the line – Source: Giuseppe D'Ascoli 2020

Conclusions and openings, from the city to the line and from the line to the city.

From what has been said, an intervention strategy for a possible reuse of the former railway's spaces should include a series of connected phases and processes, as well as an interdisciplinary approach capable of widening horizons, possibilities, and results. Similar experiences show how, having identified the traces, it is necessary to choose which signs, compared to others, deserve a rethink and therefore a possible transmission to future generations. The condition of the Alifana is emblematic of the status of the abandonment that also involves the neighboring fragments: the residual green in a state of abandonment, in fact, characterizes the entire line. The infesting vegetation has attacked and continues to grow even in abandoned structures bundled along the former railway. A conscious attitude, however unitary, should consider the contextual heterogeneity that the railway meets along its 12km of route and necessarily provide ways and techniques that can recycle and return to the community green areas of waste. In the open spaces of abandoned structures lapped by the railway, a series of possible focal points for an ecological infrastructure system are identified. These places, starting from the recycling of residual green areas, could be rethought. But with what kind of Project?

The Alifana at the time of construction, crossed the territory of Campania then unurbanized, arrived at the gates of the city. The process of decommissioning, still ongoing, started for different reasons – among them the growth of the city (increasingly dense) and the new ways of living and reaching it (with the growth of the suburbs decreases the typical commuting of the last century) – has made it today highly incompatible with the dense cities lapped. An absent and empty road but still legible starting from the urban forms that depend on it and that adapt to it. In this sense a conscious project of reuse would have multiple objectives: certainly, the comparison with an abandoned infrastructure that could become other, but above all the need to mend and program the fractures and transformations generated by this in the *urbis* form. What one imagines is a conversion of the former railway into an urban infrastructure, a road–park that from linear continuously

should become transversal: through a project capable of moving through diversified uses and grafts, from the city to the line and from the line to the city.

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Sundays in Avenida Paulista: a car-free open space for people in São Paulo

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Abstract

One of the main avenues of São Paulo, Avenida Paulista has undergone several transformation processes since its inauguration in 1891. Conceived as the central axis of a new elite neighborhood, over time, it has become a financial and cultural center. Considered the symbol of São Paulo, its privileged position guaranteed an unique urban quality and also contributed to its consolidation as the city's main social space. This article focuses on recent events that reinforced the avenue's role as a place of socio-spatial practices, more specifically, since June 2015, within the Paulista Aberta program. The proposal, led by civil society organizations, was inspired by the Open Streets, or Ciclovías Recreativas, movement and aimed to transform the avenue into a car-free open space every Sunday. From its first implementation, the Paulista Aberta program depends only on the interruption of motorized vehicle circulation and even after it was made official as a public policy, there aren't strict rules of operation. Based on field observations, this study argues that the temporary transformation of the avenue relies on the diversity of activities spontaneously practiced by its users since the absence of official programming and morphological changes allows people to enjoy the space freely. This transformation may demonstrate that the avenue holds other dynamics beyond its strictly functional aspect, an opportunity to reveal "enchanting spaces" in a city of streets ruled by cars.

Keywords

Open Streets, temporary transformation, social-spatial practices

¹ Simas, Luiz A. O corpo encantado das ruas. Rio de Janeiro: Civilização Brasileira, 2020.

Introduction

Since 2015, Avenida Paulista, located in the central area of São Paulo, has been temporarily transformed into a space exclusively for people. Through the "Paulista Aberta" program, this emblematic component of the city's road system became a car-free open space every Sunday and holiday for 8 hours, from 10 am to 6 pm. During this period, no changes other than the restriction of motorized vehicles circulation were made, meaning its functioning premise did not rely on the use of temporary structures nor on the definition of fixed programming.

In this sense, this article aims to discuss the role of Paulista Aberta as a proposal of street adaptation, in order to understand which transformations were enabled by its implementation both regarding the existing physical space of the avenue and its use. The arguments and results presented here are based on the field research carried out during 2019 and the beginning of 2020, almost five years after the program was first experimented. The observations made in loco were complemented with a survey of documents and media publications that helped to elucidate the conditions that made part of Paulista Aberta's process of implementation and consolidation.

This experience points to the importance of road spaces as places of coexistence and social-spatial practices and, within this debate, fits into a broader context of recent movements and policies that proposed new ways of thinking and planning urban streets. The *Urban Street Guide*, publication organized by the National Association of City Transportation Officials (NACTO), for example, proposes "a new approach for street design" focused on people and argues that "streets are public spaces for people as well as arteries for traffic and transportation", emphasizing their role beyond the functional aspect that tends to characterize them, mostly when it comes to proposing means of intervention. On the opposite direction of the premises observed throughout the 20th century that faced the streets as traffic issues, the guide also affirms that streets act as "a catalyst for urban transformation", which

National Association of City Transportation Officials. *Guia global de desenho de ruas*. São Paulo: Senac, 2018.

³ Ibid.

⁴ Ibid.

experiences such as New York City's Plaza Program, initiated in 2007, can help demonstrate.

Most recognized by the transformation of Times Square, in 2009, the program's actions were able to decrease the number of accidents involving vehicles and pedestrians, as well as improving traffic flow in Midtown Manhattan⁵. The interventions were based on the reorganization of traffic circulation and better use of existing areas of the road system that were converted into plazas. This experience demonstrates the importance of addressing street interventions from a human perspective, aiming to improve their quality as social spaces as well as circulation axes.

Closer to the case study analyzed here, in the first decade of the 2000s, the growth of the Open Streets movement also stood out, specifically on the American continent. An Open Street program or event, promotes the temporary opening of streets for people, and the origins of this model trace back to the early 1970s within an initiative called "Ciclovía" in Bogotá. At the time, the movement began as a political act led by cycle activists seeking to promote the bicycle as a transportation modal. Although the experiment resulted in the establishment of Ciclovía as a public policy by then, its popularity began to grow outside Colombia only in the beginning of the 21st century:

The alignment of Ciclovía in the mid-2000s with a transnational network of sustainable transportation and public health advocates in search of policies to materialize their global agendas of reducing emissions and promoting nonmotorized transportation and physical exercise in urban environments is at the core of what allowed Ciclovía, after 30 years of almost anonymous existence, to be constructed as an international best practice and circulate widely.⁶

Nowadays, around 35 cities in Latin America and 90 in the USA and Canada⁷ have or have had implemented initiatives following the Ciclovía

⁵ Lydon, Mike, and Anthony Garcia. *Tactical Urbanism: Short-term Action for Long-term Change*. Washington: Island Press, 2015.

⁶ Montero, Sergio. "Worlding Bogotá's Ciclovía: From Urban Experiment to International 'Best Practice'". *Latin American Perspectives* 44, no. 2 (March 2017): 111–131. DOI: 10.1177/0094582X16668310.

⁷ According to data available at https://cicloviasrecreativas.org/ and https://cicloviasrecreativas.org/ and https://cicloviasrecreativas.org/ and https://cicloviasrecreativas.org/

model, which became known as an Open Street or Ciclovía Recreativa program, according to the networks Red de Ciclovías Recreativas de las Américas (Red CRA) and The Open Streets Project. These organizations were created to enable the knowledge exchange related to the open streets experiences that began to be implemented at this period, gathering relevant data in publications such as the *Manual para implementar y promocionar la Ciclovía Recreativa* and *The Open Streets Guide* and also through the realization of international seminars.

It is important to point out that the ease of implementation and low impact of these initiatives, compared to other models of urban intervention, enabled their reproduction in cities of different scales, from metropolises to small towns⁸. In practice, the definition of the main focus and means of operation of each open street program rely on the local interests involved, either from public administrators or non–governmental organizations. Therefore, it is understood that, although essentially, they share a general objective, each experience is unique, a product of different economic, social and cultural conditions.

The Paulista Aberta proposal was influenced by the Open Streets movement, which positions it into this broader debate and helps to envision what are the possibilities brought up by its implementation in a metropolis like São Paulo. In order to evaluate the transformations enabled by this experience, this article proposes to analyze both the conjunctural factors that contributed to its effectuation and what characterizes the program itself, from a practical perspective.

Avenida Paulista and the Paulista Aberta proposal

The Paulista Aberta program was conceived by a civil society organization called SampaPé!, founded in 2012 and, since then, active in the promotion of walkability in São Paulo. As explained by SampaPé!'s founder Leticia Sabino⁹, based on their personal experience with the "Muévete in Bici" program in Mexico City¹⁰, they came up with the idea

⁸ Sarmiento, Olga L. *et al.* "Reclaiming the streets for people: Insights from Ciclovías Recreativas in Latin America". *Preventive Medicine*. Elsevier, Vol. 103 (October, 2017): 34–40. https://doi.org/10.1016/j.ypmed.2016.07.028.

In an interview granted to the authors on November 27, 2019.

In operation since 2007 it was inspired by Bogotá's Ciclovía.

of implementing an open street program in São Paulo. The proposal was strengthened by the mass demonstrations of June 2013, a series of protests that later would be known as "Jornadas de Junho", motivated, at first, by the increase in public transportation fares in São Paulo. During this period, Avenida Paulista was constantly occupied by protesters and, after the dispersion of the manifestations, often ended up used by the local residents to walk and practice physical activities, taking advantage of the car-free space.

In 2014, in partnership with Minha Sampa network, an organization experienced in bringing civil society demands to the public administration, SampaPé! developed an online campaign to promote the Paulista Aberta proposal, which was formally forwarded to the mayor in December of the same year. From this point, the dialogue with the government was established and undoubtedly contributed to the realization of the program, however, it is also important to recognize the favorable conjuncture: the alignment of the proposal with the agendas of the municipal management at the time and the political will were determining factors.

The administration of Mayor Fernando Haddad (2013–2016) was responsible for the implementation of 400 km of bike lanes¹¹ and over 400 km¹² of exclusive bus lanes, an increase of around four times the existing structure available for both transportation modals until then. In addition to the urban mobility agenda, it has promoted other relevant initiatives such as the revision of the city's Strategic Master Plan (Plano Diretor Estratégico) and the development of plans for the reactivation of existing open public spaces. Close to the New York City's Plaza Program experience, the pilot project "Centro Aberto", for example, proposed to test alternatives to motivate permanence in downtown São Paulo repurposing underutilized or degraded plazas through the "renewal of forms of use" promoting cultural activities and the use of

According to Companhia de Engenharia de Tráfego (CET), São Paulo's traffic department. Available at http://www.cetsp.com.br/ media/1100812/Plano-Ciclovia%CC%81rio_2020.pdf.

According to CET as published in Mobilize: https://www.mobilize.org.br/noticias/9261/cidade-de-sp-atinge-500-km-de-faixas-para-onibus-nesta-segundafeira-29.html.

São Paulo (city). *Centro Aberto. Experiências na escala humana.* São Paulo: Secretaria Municipal de Desenvolvimento Urbano - SMDU, 2015.

temporary urban furniture.

Another determining factor for the effectiveness of the program and its subsequent consolidation has to do with the site of intervention itself. One of the most important avenues in São Paulo, Avenida Paulista was designed to be the central axis of a new elite neighborhood at the end of the 19th century. Since its inauguration, in 1891, the avenue has stood out as a "locus of experimentation of avant-garde proposals and ideas" 14. For instance, it was the first paved street of São Paulo, in addition to the already innovative morphology with separated lanes for the tramway and the circulation of carriages and horses.

Over time, Avenida Paulista has become a financial and cultural center that grew along with the city, incorporating the main processes of development and modernization ongoing: the verticalization between the 1940s and the 1960s, the growth of São Paulo's road system, resulting in its widening in the 1970s, and finally, the arrival of the subway, constructed under the avenue in the 1990s. In this process, Avenida Paulista became the symbol of São Paulo, and its privileged position guaranteed an unique urban quality and also contributed to its consolidation as one of the city's main social spaces.

From its early years, the avenue has been occupied by events and celebrations such as the carnival parade and automobile races, typical activities of the wealthy residents of the time, but it has also became a destination for other citizens that came from different parts of the city for tram rides and strolls¹⁵. Through the course of the 20th century this vocation grew and Avenida Paulista became the city's primary space of public manifestations. During the 1980s, in the final years of the military dictatorship, political protests were increasingly common and, in the next decade, major events, such as the New Year's Eve party, and the LGBTQIA+ Pride Parade started to take place in the avenue and continued to be held every year to this day. Notably, beyond its role as a road axis, Avenida Paulista constitutes an important space for

Lima, Renata Priore. "Plugin: interfaces urbanas en los nuevos centros lineales: el caso de la Avenida Paulista". PhD diss., Universitat Politècnica de Catalunya, 2016.

Shibaki, Viviane Veiga. "Avenida Paulista: da formação à consolidação de um ícone da metrópole de São Paulo". Master diss., Universidade de São Paulo, 2007.

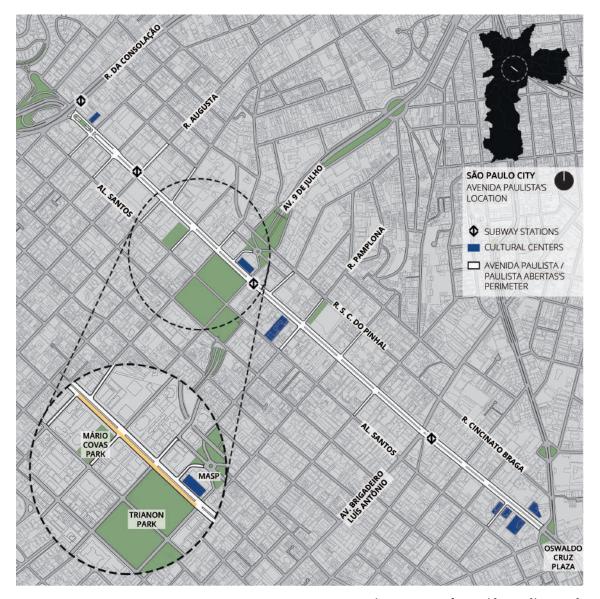


Fig.1 - Map of Avenida Paulista and the Paulista Aberta's perimeter. The area initially proposed by the organizations is highlighted in yellow -Source: Author 2022

socio-spatial practices in São Paulo.

Inspired by the foreign experiences of open streets, but also by Brazilian initiatives in Brasília and Rio de Janeiro¹⁶, the organizations proposed the Paulista Aberta program as an experiment, a starting point to discuss the use of the streets in São Paulo. At first, they proposed the closure of only three blocks, between the two public parks located in the avenue (Fig.1):

Even though the proposal was well received by the municipality¹⁷, its realization was delayed due to the beginning of the construction of the bicycle path in the avenue, part of the city's Bicycle Plan. Despite the criticism of political opposition and those resistant to the plan's implementation, the Avenida Paulista's bicycle path (Fig.2) was built between January and June of 2015 and its inauguration also became the first rehearsal of the Paulista Aberta program, as stated later both by the organizations SampaPé! and Minha Sampa and by city officials¹⁸.

In fact, there wasn't any previous arrangement, this first experience of the program was the result of the fast articulation of the organizations involved in its promotion. Sabino explained¹⁹ that they realized that the bicycle path inauguration event would attract many people so the traffic department would have to clear the entire avenue to ensure everyone's safety. With that in mind, SampaPé! and Minha Sampa members invited other groups to occupy the avenue with activities such as play areas for children, picnics and street food vendors, in order to establish permanence zones that would prevent the reopening of the thoroughfare for cars after the cyclists passing.

The occasion allowed not only the realization of the proposition, but also its expansion considering that the original proposal presented to the municipality was more modest (Fig.1). Finally, it has shown that it

The "Eixão do Lazer" and the "Áreas de lazer" programs, existing since the 1990s.

¹⁷ According to SampaPé!'s founder Leticia Sabino, in the interview given to the authors.

As explained by Leticia Sabino and also as publicly stated by Jilmar Tatto, commissioner of transportation, and the mayor Fernando Haddad according to news published on the official website of São Paulo's City Hall: https://www.prefeitura.sp.gov.br/cidade/secretarias/subprefeituras/vila_mariana/noticias/?p=58574

In an interview granted to the authors on November 27, 2019.



Fig.2 - The Avenida Paulista's bicycle path implemented in 2015 - Source: Author 2019

was possible to temporarily change the use of the avenue, opening the space for people to enjoy freely and safely. The first experience motivated the realization of two more trials until the authorities decided to make the Paulista Aberta program official in October of 2015.

Since then, Avenida Paulista became a car-free open space every Sunday and holiday. Within its process of consolidation as a public policy, the program was expanded to other areas of the city and became part of the "Ruas Abertas" program. Another 24 streets and avenues were designated to integrate the program, however, neither of them was as successful as the Paulista Aberta. Over the years, there was a significant decrease in the number of streets registered in the program, from 24 to 16 from 2015 to 2018²⁰. Moreover, Avenida Paulista was the only open street reactivated after a period of suspension due to Covid-19 restrictions. The Ruas Abertas program was suspended in March of 2020 and after 17 months, in July of 2021, the city hall decided to reopen Avenida Paulista to the public as an experiment, but is unclear if they were considering to reactivate the other thoroughfares that were still part of the Ruas Abertas program, and why they weren't even mentioned in the official notes.

As pointed out, the singularity of Avenida Paulista in São Paulo was a determining factor both to the realization of the Paulista Aberta program and to its maintenance, however it is also noteworthy that the transformations provided by the program itself, in operation, are very significant. These transformations occur independently of interventions in the physical support of the avenue and the formal indication of use alternatives. To understand the program from the user's perspective, the observation of its operation was essential, and the results of this analysis will be addressed below.

The Paulista Aberta program

The field surveys conducted throughout 2019 and in early 2020 had an exploratory nature, in order to get closer to the object of study during its operation. The incursions were made on foot so the impressions

According to the latest official information available in: https://www.prefeitura.sp.gov.br/cidade/secretarias/esportes/noticias/index. php?p=267722.

registered point out to the use of the avenue in the human scale. The main goal was to observe the users' actions as well as their interactions with the existing physical support of the avenue itself. These visits produced a wide photographic documentation of the activities developed along the Paulista Aberta program, and also an interpretative basis for the questions posed by this research.

Through the observation of the program in operation, it was possible to identify the multiplicity of activities carried out by users. In general, most people went to Paulista Aberta with the purpose of walking along Avenida Paulista, especially in the car lanes, the space conquered by the program (Fig.3). The stroll was done by families, groups of friends, couples, people with their dogs and single people. Cyclists, skateboarders and skaters were also frequent users as well as people practicing physical exercises.

But the field work also revealed the occurrence of other events such as the street commerce (Fig.04, Fig.05), the various performances of street artists (Fig.06, Fig.08), group encounters and even the promotion of products and services. These events differed from the spontaneous activities, practiced voluntarily by the people who attended the program, because they depended on previous organization and, sometimes, on the use of supporting materials.

This observations and photographic registers made *in loco* helped to understand "what" did attendants use to do during the program, that is, what were the alternatives of use found by those who chose to spend their Sunday or holiday at Avenida Paulista since there weren't official activities programmed as part of the Paulista Aberta initiative. It was also verified that although there was a great variety of activities, with distinct objectives and scales — in the sense of spatial occupation —, they occurred simultaneously. There wasn't predominance of certain practices over others to the point of causing hindrances. On the contrary, there was a significant interaction among the different types of activities, from the more direct relations of buying and selling and the audiovisual records made by the users (Fig.06), to the visual contact among frequenters, the co-presence among strangers.

In exceptional situations, there were adaptations: if some activity, such as political protests (Fig.07) or performances of street artists



Fig.3 - People walking, cycling and exercising during the operation of Paulista Aberta - Source: Author 2019



Fig.4 - Street vendors bring along supporting materials to expose their products - Source: Author 2019



Fig.5 - Handicraft products were most commonly offered by the street vendors, but there were also unusual services such as hairdressers - Source: Author 2019



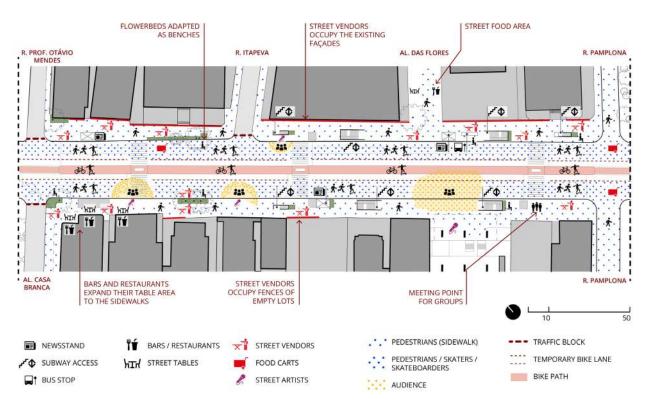
Fig.6 - People would interact with the other activities around: dancing to the instrumental band's presentation or filming and photographing - Source: Author 2019



Fig.7 - Sometimes activities could occupy larger areas of the avenue, even though, the functioning of the program wasn't drastically altered - Source: Author 2019



Fig.8 - As the artist used the sidewalk as a stage, the audience was settled in the asphalt - Source: Author 2019



ACTIVITIES	PREVIOUS ORGANIZATION / SUPPORTING MATERIALS	PERIOD / DURATION	WHERE
WALKING	NO	ALL DAY	CAR LANES AND SIDEWALKS
RIDE ON WHEELS	NO	ALL DAY	CAR LANES, BIKE PATH
PHYSICAL EXERCISES	NO	MOSTLY MORNINGS	CAR LANES
DANCE	NO	MOSTLY AFTERNOONS	CAR LANES
CHILDREN GAMES	NO	ALL DAY	SIDEWALKS
PHOTOGRAPHY, VIDEOS, SELFIES	NO	ALL DAY	CAR LANES AND BIKE PATH
GROUP MEETINGS	YES	ALL DAY	SIDEWALKS
STREET ARTISTS PRESENTATIONS	YES	MOSTLY AFTERNOONS	SIDEWALKS
SREET VENDORS	YES	ALL DAY	SIDEWALKS
FOOD CARTS	YES	MOSTLY AFTERNOONS	CAR LANES
PUBLIC MANIVESTATIONS	YES	ALL DAY	CAR LANES
PROMOTION OF PRODUCTS AND SERVICES	YES	ALL DAY	CAR LANES, SIDEWALKS

Fig.9 - Representation of the activities practiced in Paulista Aberta based on the field observations made during the research; Activities Table: organization of the main activities observed and their characteristics - Source: Author 2022

(Fig.08), happened to occupy larger areas of the pavement, the pedestrian flow or bicycle circulation would reorganize themselves, using the available lanes and sidewalks to continue the route.

Finally, from the field surveys, it was possible to interpret the spatialization of the program along Avenida Paulista (Fig.09). Besides the program's opening hours, no sectorization rules were established, however, it was observed the formation of behavior patterns that started to define "how" the avenue was occupied by the program and its users.

Although part of the practices verified were related to the street's own sense of circulation, some activities provoked permanences that, in turn, caused unexpected appropriations of certain elements of the physical space of Avenida Paulista. For instance, the sidewalks were frequently used as stages for musicians, while the audience occupied the pavement, sitting on the asphalt (Fig.08).

The main activities observed, as well as their spatialization, were synthesized in the map below, which represents a stretch of Avenida Paulista, between Pamplona Street and Trianon Park:

Conclusions

The study presented in this article aimed to understand the impact of the Paulista Aberta program in São Paulo. First proposed as an experiment, the program's main goal was to provide more car-free open spaces for people to enjoy freely and more safely. As exposed, the functioning of the program itself relied only on the interruption of vehicle traffic, a premise that has been maintained even after it officially became a public policy.

Before proceeding with the investigation of the program in operation, it was necessary to comprehend how it was implemented, from the proposal to the acceptance by the municipality. The analysis of the available documents, media publications and the testimony of a participant of the process, revealed that the unique condition of Avenida Paulista was very important for the effectiveness of the program.

. Among the factors that contributed to this observation it's important to highlight: (1) the visibility the avenue enjoys being one of the main spaces for public manifestations in São Paulo, besides as the

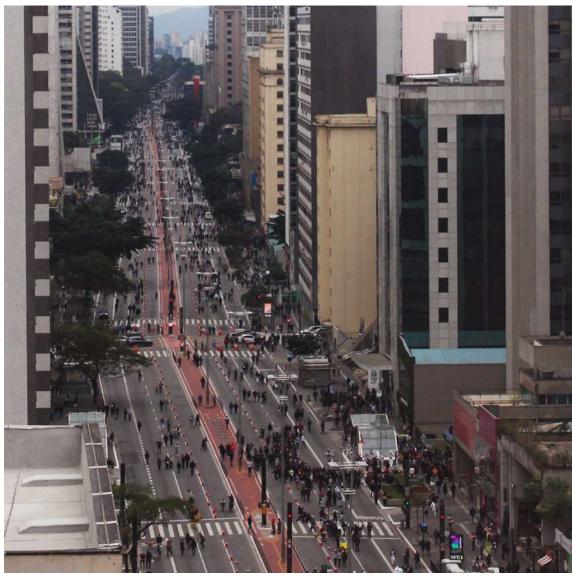


Fig.10 - View of Avenida Paulista during the Paulista Aberta program - Source: Author 2019

address of important buildings, cultural centers and parks; (2) the accessibility, especially by public means of transportation, with three subway stations located on the avenue itself and exclusive bus lanes; (3) its role as a symbol of São Paulo and, finally, (4) the favorable conditions of the existing physical space — the dimensions of the avenue, the topography, width of sidewalks, etc..

The analysis of the conjuncture in which the program was proposed also revealed that the alignment with the municipal administration agendas and the political will were determining. At the same time, the participation of civil society movements throughout the process was fundamental. Besides being responsible for the proposal, the organizations managed to articulate its realization along with the bicycle path inauguration event, which enabled its expansion and wide promotion.

On the other hand, the political support went as far as officially incorporating the civil society's proposal and enabling its expansion with the implementation of the Ruas Abertas program without further developments. Different from the experience implemented in Avenida Paulista, strengthened by the avenue's visibility and accessibility, opening streets in other areas of the city required further studies and follow-up, which didn't happen.

In the case of Avenida Paulista, the lack of control actually contributed in a certain way. The fieldwork demonstrated that the Paulista Aberta program is defined by its own users. Moreover, all the activities observed were spontaneously practiced by the public, even those which required previous organization. So far no specific spaces have been defined for each activity or the need for permits for the commercial and artistic manifestations have been established. The rules of use and organization of the space, verified in the field, are the result of a collective and gradual construction, of non-verbal agreements among the program's frequenters and of the respect for the other, in the understanding that the street belongs to everyone, not to a specific group. Finally, the implementation of the Paulista Aberta program revealed that transformations do not necessarily require physical changes in the existing space and the way people use and interact with it can also indicate other possibilities, as well as different needs not met by the current situation, which may contribute to the planning of future interventions.

Even though the Paulista Aberta program could not be successfully replicated in other areas of the city, it is still an important achievement within the dispute for open spaces, specially those s associated with the road system, which throughout the 20th century were dominated by automobiles. This experience reveals the relevance of reclaiming those as places for public life.

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Street Life Adapting to Pandemic Lockdown Temporalities:

Reflections in the Context of Greek Cities

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Abstract

During the covid-19 pandemic, public space has been the field of unprecedented social conditions and experience of contemporary urban culture. The article reflects on the street in the lockdowns, as an institution and an ever-changing "critical subject". It discusses the procedures and changes that took place by means of everyday inter-subjective street life in the shadow of major events. New rules and policing have spurred new routines and temporalities to cover for real needs and demands of social interaction. Following the first lockdown shock, urban residents have fundamentally questioned the rules for imposed and controlled social distancing in the city. Everyday practices reinvented and adapted common street life.

While our understanding has been broadened by sharing experiences there is still a distinct urban research gap to be addressed in various cultural contexts. The article presents instances and data of pandemic streets in Greek cities and towns. The discussion is based on in-situ observation, interpretation, and visual representation of streets' use during the pandemic lockdown in Spring 2021. It draws from the material systematically compiled in the framework of a 6th semester Urban Design Studio at the School of Architecture, Aristotle University of Thessaloniki. Streets have been proven once more dynamic containers and contents of fluid public and private life, adapted and in constant struggle between state and collective interests.

Keywords

urban temporalities, pandemic, spontaneous streets, lockdown adaptation, Greek cities

The street is an 'institution', an ever-changing 'critical subject', 'not to be taken for granted'.

Spiro Kostof

Today, perhaps, leaving aside all the many tricky metaphors used as an excuse for a project, one must seek [...] an idea (of public space, of a bit of city, of urban quality, of a political place) in the absence, precisely, of symbolic images, or picturesque novelty (all, alas, globalised) and a possibility of civic identity in the dissolution of the individual place in the collective milieu, in pure citizenship.²

Manuel de Solà-Morales

Public Space in the covid-19 pandemic

The core scientific interest in this article and relevant investigation rest on the understanding of how streets admirably evade strict definitions, ever-changing in the long span, in any occasion unfold in new versions of urban life expressions adapting institutionally and collectively under new conditions and needs. Streets emerge as fields of uninterrupted and continuous communication, physically delimited, yet without limits in perpetual multiplicity of forms and temporalities, with an admirable regenerative potential. The spur for this article derives from the awareness of the puzzling knowledge, deep and open at the same time, one has to master in order to design, plan, configure, new and existing urban streets and address arising challenges. Adaptation and transformation are essential elements of the city.

During the covid-19 pandemic, public space has been the field of unprecedented social conditions and experience of contemporary urban culture: restricted, rediscovered, subverted, claimed... Lockdowns and social distancing were imposed in the majority of cities and people living in the contemporary world, and still are, locally upon infection incidents. While our understanding has been broadened by sharing and published experiences there is still a distinct research gap to be addressed in various urban contexts, environmental, cultural and political conditions. There is also the risk that our experience in the public-private continuum of urban life in quarantines and lockdowns since March 2021 will be brought into oblivion while changes made will irreversibly and unconconsiously form "the new normal".

The pandemic brought forward suspension of democratic standards,³

as well as urban structural and systemic inequalities in relation to residential overcrowding and differentiated needs and opportunities for access to public space, working and environmental conditions. 4 Beyond the broadcasting of central events in the media that showcased injustice and violence, streets were claimed to publicly demonstrate against measures taken, but also in many different aspects in the everyday. The notion and strategy of "The-15-minute-city" while not totally new, in which everyone has all one needs within a 15' walking distance, has been benchmarked as the most resilient in the lockdown conditions of restricted outings in the city.5 Many contributions refer to the critical role of urban parks and nature in maintaining mental and physical health and high quality of life during the 'closures' due to covid-19 pandemic.6 Wray et al7 employ different theories (i.e. rational choice, regulation, communicative planning) to approach initial diverse responses by local authorities to restrict, invest on, educate around the public realm during the lockdowns at the first wave of the pandemic in 2020. They stress the fundamental role of public space for mitigation and adaptation in crises and conclude there's need to explore more how cities react to global complex crises with "a broader lens of the public realm" beyond public parks; a lens "that examines linear infrastructure such as roads and sidewalks and includes more 'hardscapes' (e.g. plazas, parking lots, schoolyards) that provide opportunities for social connection." At the second wave of the pandemic, cities in the Global North and the Global South promoted investments on a vast range of temporary transformations of their streets qualifying for more spacious and safer walking and cycling and facilitating a more sustainable mobility.8 There is still an ongoing discussion as to what changes have been or will be finally consolidated in public space and streets, in specific, and with what consequences and challenges for (urban) living.9

Framing the street and public urban life during lockdowns in Greek cities

The article revisits pandemic streets in Greek cities and towns during the third wave pandemic lockdown in spring 2021 (end of February to beginning of April 2021). The case of Athens centre has been excluded from the survey as in the capital city neoliberal policies for and in public space manifest clearly to their generic extremes, i.e. multi-level

branding and gentrification, policing, surveillance, protests and violent clashes, segregation and homelessness, exclusion of refugees and immigrants. This article is based on survey in numerous Greek cities and towns where regimes differ a lot as a matter of restricted scale and range of neoliberal capitalist forces in action. Thus, it approaches space as a social construct contested in everyday practices, temporalities and routines in relational manners of space production beyond the public-private space dichotomy, as an open sphere of space-time that allows for agency to unfold and at the same time, imposing policing procedures that delimit bodies in "proper" places. Urban space is at the same time a container and content of fluid public and private life, adapted and in constant struggle between state, private and collective interests. (Fig.1)

At the launch of the survey, governmental policies like restrictions of all kinds, as well as micro-mobility facilitation in investing on temporary cycle-lanes, still evolved following the first full year of the pandemic experience. At the first wave of the pandemic the Greek people living in cities were "exemplary" in complying with probably the stricter lockdown rules in Europe and giving up individual and civic freedoms. They stayed at home... One year later, in the survey period in Spring 2021, people were not that compliant to rules, anymore, while several clashes episodes and protests had taken place. It was only allowed to move around in the city after sending an sms code for specific reasons incl. outdoor physical exercise, walk with a pet, have a coffee or food from a 'take-away', individually or in groups of 3 persons, keeping distance of 1.5 meters and no more than in 2 hours duration (code 6).

The article draws from the material systematically compiled in the framework of a 6th semester Urban Design Studio at the School of Architecture, Aristotle University of Thessaloniki, when it was still mandatory for Greek universities to educate in solely online courses through technologies of remote teaching. The time of the survey is also critical to the subject in relation to the course evolvement given the difficulties of teaching the previous year¹⁵. As the mode of teaching and student attendance had been predefined at the launch of the academic year, most students were at their family homes all over the country and it was not possible for them to have a common site for field observation,

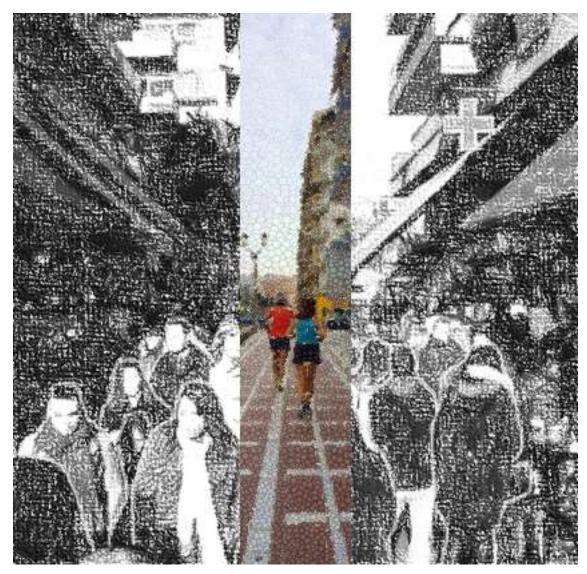


Fig.1 - Street Life Adapting to Pandemic Lockdown Temporalities - Greek cities, Source: Author 2022

intrepretation, analysis and representation – core skills and processual embedment of knowledge in urbanism. It was decided to shift the pedagogy towards the sites students could visit on their own there where they were to fulfill the in–situ observation assignment on the grounds of 'code 6' mobility.

Greek cities and towns are highly dense, horizontally and vertically mixed use environments lacking adequate social infrastructure and open spaces. Streets are packed with parked cars. The experience of 'the city at the eye level'16 is diverse and rich in social interactions. Students were told to choose a public space they already knew well where they stayed then and explore it in their current pandemic use. Beyond the criterion of previous good acquaintance with the specific public place, criteria in terms of public space classification remained open within the Greek city context. The choice should take into account the significance of the public space chosen in the wider public space network in the pandemic e.g. a central or important spot on a symbolic or functional level, a neigbourhood one, or even interlinked public spaces within a short time reach, or other. Students were provided with a set of queries to delve into the site conditions and a series of lectures to advance their understanding of public place main attributes and adaptation possibilities, e.g. mobility and gatherings, groups of users and rhythms, meeting points, material and immaterial boundaries, users' views on their well-being in the pandemic public place, etc (perceptions, behaviours, activities, routines).

Students were asked to use several techniques and tools to observe current urban conditions and the special pandemic terms and restrictions of use of the public space, collect instances and data and juxtapose those to their pre-pandemic experience and character, qualities and realities of the same places (photography, mapping, diagrams, drawings and sketches, but also mental maps, collage, video, recordings, questionnaires etc).¹⁷ This exercise of mindful observation¹⁸ and intense reflection proved to be very productive in documenting and representation of pandemic Greek cities and towns all around the country, in the mainland and the islands. Students created a series of diagrams and maps putting the chosen public space in the centre of their studies to analyze the main characteristics of the urban fabric (figure ground, land-use mix, movement and mobility, ecosystemic features

and nature presence, landmarks and equipment). (Fig.2, 3)

Following observation, site measures, provoking challenges and filling in exploratory questionnaries in discussion with users, and other means of qualitative documentation, they represented the conditions in images and graphs, before and during the pandemic, at different times of the day or seasons, with snapshots or instances of notable events that took place and processes that shape the atmosphere or collective behaviour and memory. They managed to seize aspects of the pandemic time in place.

Pandemic public space in focus

The selection of public space explored, by definition in walking distance from students' homes - included typical areas of the urban public sphere recognized even at the media as important spots for pandemic urban life, i.e. parks, and squares, in central and neighbourhood areas, waterfronts, etc. Astonishingly all distinct public spaces chosen fall into the categories of "positive" or "negative" spaces in the classification of Carmona¹⁹ using aspects of function, perception and ownership (from design, socio-cultural and political-economy perspectives), and in that, they are all considered "clearly public" and belonging to the jurisdiction and management by the Municipalities given that all retail spaces and semi-public ones belonging to the private sector management like shops, malls etc were closed or had no seated activity on the streets for social distancing purposes, namely catering businesses (cafeterias, restaurants etc). The sample included also whole urban areas conceptualized as constellations of interlinked public spaces and streets, in residential and other areas. (Table 1)

Streets in the pandemic as spontaneously adapting public places

At a first glance it is interesting to point out that streets and roads were not the main type of public space rendered as important destinations when going out of homes in the pandemic urban conditions by students although streets were mentioned as a possible category of public space to be studied in the assignment. In the sample there were notable streets such as commercial pedestrian streets equipped with sitting spots, waterfront promenades, changeable streets that host temporary food markets and streets as linear assemblages, "arma-



Fig.2 – Mapping shifts of street-use and intensity of street-life before and during the pandemic, Thessaloniki, Martiou Str., student work: Freideriki Koura-Manoli, March 2021



Fig.3 – Mapping street use and public life before and during the pandemic, Katerini, Elefhteria sq. area, student work: Eleni-Danai Pavlidou, March 2021

Type of urban space¹		Type of urban area		
Positive				
Natural / semi-nat- ural	Beaches, rivers, streams, peri-urban natural reserves (lakes, dams)			
Civic	Squares (central, neighbour- hood, suburban), promenades, waterfronts, streets, pedestri- an streets	Neighbourhoods Historic centres Recreation / tourist areas		
Open	Parks, urban groves, former military camps, archaeological sites, schoolyards			
Negative				
Movement	Main roads			
Service	Car parks			
Left-over	-			
Undefined	-	Table 1. Public spaces selected by students as important in Greek cities in		

the pandemic

tures" that define "space of flows or sequential experience"²¹ along smaller open urban spaces. Streets and roads however, were not directly considered of major influence in pandemic wellbeing and livable use. A reason could be that students were focusing their attention in designed places rather than in more functional, receptive or servicing public places. However, in their qualitative descriptions and representations streets emerged as important public entities in most cases as they showcased the processes and performativity of urban life out in the public sphere. (Fig.4)

The shape of streets in place did not change, only their use and human presence. Neither the management structures nor the management mentalities have changed – more inert than the material environment. And these intangible dimensions must be kept in mind when we think that the city changes and develops since they determine urban life. Adaptation came out of the restrictions, but as a collateral effect. (Fig.5)

In conditions of almost no street traffic streets were used as areas to walk, meet and play in their very centre. Between the home and the public space, as a destination, square, park, waterfront, whatever, streets became the immediate public, often merging in behaviour and serenity with home. As the main activity of people out in the public was walking, strolling or running streets adapted in major corridors of publicness and social life. Making a stroll through them increased the opportunity to cross with friends and neighbours; to socialize, standing wherever or leaning on streets edges, building frontages and closed shopping windows or on immobilized cars. Street edges compensated for removed equipment from central dismantled public spaces. Some people brought out portable chairs and other seats. Children enjoyed playing on streets, almost safely, happy there were so many more children in the neighbourhoods out to play.

Street functional hierarchy was subverted as shops closed down or functioned in click-away mode. Take-away catering facilities, food stores, super-markets and courier hubs became the new hot public spots on streets concentrating people interests for informal exchange or programmed friendly meetings. They were upgraded in vital nodes of logistics. The mix of users simultaneous present on streets in terms of age and gender was very high especially at evening hours.



Fig.4 – Discovered edges at narrow streets during the pandemic, Thessaloniki, Egnatia str. area, student work: Vasiliki Antypa, March 2021



Fig.5 – Street life absence, Thessaloniki, Egnatia str. area, student work: Vasiliki Antypa, March 2021

Most public spaces mentioned in Table 1 are circumscribed by streets. Streets were co-functioning with them. They broadened their field of influence in public life adapting in rhythms, fixed lockdown temporalities and uses. They offered all kinds of edges to compensate for the lack of urban equipment to welcome people out in the open, even when it was prohibited to enter and use the "main" public places, closed by the Municipalities. They became traffic calmed "shared spaces" and inofficial bikelanes. They provided for viewpoints in the neighbourhood anew, towards the whole facades, to cater for the public-private interface in forgotten resources (lived and communicative balconies, baskets in strings to exchange food etc.).

Policing took place on major streets and roads, and waterfront promenades. During the period of study it was stricter than at the first wave of the pandemic when most people were scared for their health and therefore disciplined, staying in. Policing was not equally enacted in all cities and towns, irrelevant of the settlement scale. Humane interactions persisted. Police blockages for controls in cars and of residents in central spots made people invent new trajectories for one area of the city to the other. Streets proved to have a radicalized potential to cover for real needs and showcased the disobedience to the new public order of policing civic life. Secondary streets and the wider street grid defined a way out of the everyday surveillance and materialized the hidden or protected social interaction reinventing conventional traffic hierarchies. They functioned as drone–protected havens and a safe way-out at conflicts to evade violent police practices breaking crowded gatherings in "main" public places.

Streets entangled as they are in institutional acts, social and material infrastructures, between the home and the main public places, spontaneously adapted to carry all the weight of publicness in the pandemic and support the invented routines and lockdown temporalities. They represented the persistence and wish for public and collective urban life; street-life as a deep structure of memory in people's mind and body.

As a conclusion

Following the first lockdown shock, a year later urban residents fundamentally questioned the rules for imposed and controlled social distancing in Greek cities during the successive restrictions. New rules and policing have spurred new temporalities to cover for real needs and demands for social interaction and personal well-being in public space. In the days of our "closures", public open and green spaces but also the technological infrastructures of digital communication proved to be insufficient in Greek cities. On the other hand, the flexibility of the built fabric and lay-outs, as well as businesses to change to deliver what we needed, was admirable. The need for everyday inter-subjective street life took place in adapted routines and adapting streets in the shadow of major events and overall generic lockdown, i.e. human presence and appropriation, meeting, coexistence and care, physical exercise. Everyday practices reinvented and adapted common street life into vital supportive 'grids' of other often more central public places acting as destination stimuli to get out of homes. Following the recent experience of the pandemic, one realizes how flexible the space we live in is and how our habits in the city and its streets could change to cover mindfully our needs. This is huge lesson in urban design. The regenerative potential of streets rests in public space as a container of real life.

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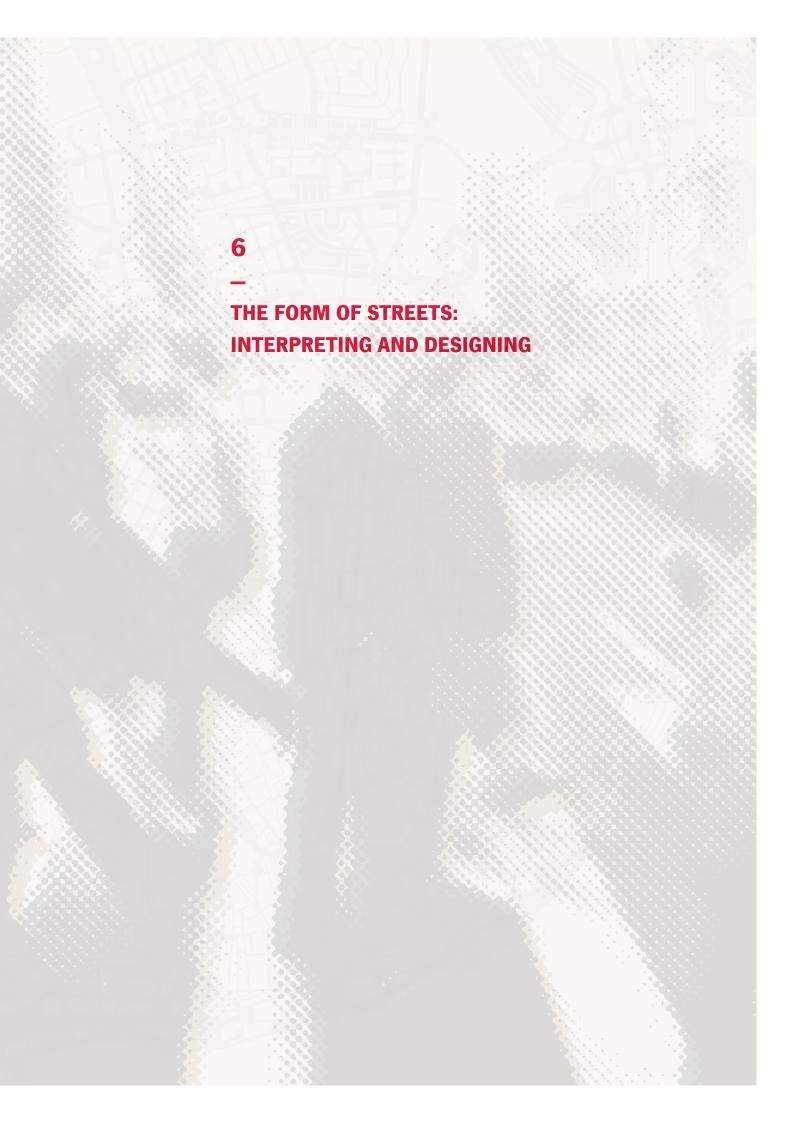
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Street AC (after COVID) Lagos as a case study for the Academia

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Abstract

Project Design wanders between the professional studio and the academy. Both need each other. In this complementarity, we resort to examples of project proposals, for cities and namely street spaces, in pedestrianized historical centres, as a field of analysis and proposals to return the street to its initiatory function.

The street as a "space of delay", a place of dwelling¹, contaminated by transversal intersections², in the example, analysed and developed within the Academia³, brings together conditions that can be read in other projects developed in the professional Praxis.

What is the new function of the street? Street as an infrastructural element, functional street or community space reinvented as of *delay* (purely a dwelling location)? Street in post-Covid tourist cities, what opportunities can be gauged through the Project?

The aim of this paper is to respond to the above inquiries. These possible answers are to be represented through different students' design proposals that are stressing the perceptive experimentation of the public space once their adjacent complementary and invisible spaces are hypothetically merged into the city street structure.

Keywords:

Invisible, delay and pocket spaces.

The Modern city presupposes, in its initiatory model, a *tábula rasa*¹.

to locations, and through locations to spaces, inheres in bis dwelling.. The relationship between man and space is none other than dwelling, strictly thought and spoken.

¹ Human's relation

² As the semilattice abstract structures described by Christopher Alexander in is essay A City is not a Tree.

Heidegger, 1971.

³ An undergoing Project being developed in the last year of the Integrated Master Degree (fifth year) to the city of Lagos in the Algarve.

This expression was firstly used in ancient Greece, by Aristotle or Alexander of Aphrodisias, in order to describe a condition in which human consciousness would be emptied of any innate knowledge, a possible condition of the newborn. Later John Locke in his 1690 essay Essay Concerning Human Understanding, defends this idea that all men are born equal of "empty consciousness" as opposition to the political theories of the time where absolutism was in force in the strongest European monarchies.

cleansed of context and pre-existences. The model is based on the rationality of its urban fabric and buildings. ²

The canonical historic city is the result of a compromise between topography and climate and develops at the mercy of the often haphazard and/or erratic dynamics of a (circumstantial and/or erudite) design, from its organisation to its unique buildings. In this singularity and apparent unevenness of the urban layout the city presents a vibration, by the sum total of its elements, so diverse and disparate. In his text Transparency³, Colin Rowe exposes us, the invisible transparencies of classical architectures, which to our eyes can be understood as apparently opaque constructions. That is, he recognises layers of planes, filigree of elements, which filter the gaze and trigger the imagination of each one in its own personal reading. The phenomenal perception makes visible the invisible parts of architecture. In the same article, Rowe also uses some Le Corbusier's works, comparing them with Venetian palaces, to recognise perceptive qualities and similarities in this comparison between different objects, concluding on the flatness of inners over outer spaces and vice versa. The vibration resulting from this superposition of "thicknesses" summons our imagination to construct the apparent invisibilities, and in this way, those architectures become extensions of the commons.

Kevin Lynch, in his book *The Image of the City* introduces us to the notion of *imageability*. Drawing on the kinesthetic idea of the perception of the urban environment, Lynch writes on *imageability* as a perceptual layer apparently "invisible" to the most inattentive eye to the reception of the various urban facts encountered along a route. This notion of focusing the gaze interests us particularly, not only because there are actually structures that to a more distracted gaze are invisible and that their apprehension catalyses the understanding and

The *tábula rasa* idea was adopted by the modern movement heroic times, as a paradigmatic demonstration of its position of rupture with History, a position consecrated at the 1933 CIAM (*Congrés Internationale de Architecture Moderne*) through the famous *Cart de L'Athens*, which would be the touchstone of the several following CIAM's, at least until the 1947 congress in Bridgwater.

Rowe, 1996

knowledge of the city and its urban, spatial and environmental fabric. This possibility introduces a less linear and more complex structure of the possibilities of traversing and discovering the city, and therefore to inhabit it. Lynch's *imageability* becomes the imagination of Marco Polo, who, in describing the possibilities offered to what Fedora⁴ would be or will be, explores its capacities for transformation and mutation in order to allow it to survive, but also, and for what we are particularly interested in, the understanding of the canonical (and historical) city and its future possibilities.

This leads to the definition of what might be called imageability: that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement which facilitates useful mental images of the environment. It might also be called legibility, or perhaps visibility in a heightened sense, where object are not only able to be seen, but are presented sharply and intensely to the senses.⁵

. Therefore, the evident given image to one, might not correspond to the "real" image to the other, leaving to each one of us the perception and understanding of its meaning, presence and structure. Imagination becomes a fundamental tool for the conception of each one's city, which, as Marco Polo says, is brought and made into a reduced model, in each one of the glass spheres representing the *possible* different Fedoras.

Both Rowe and Lynch propose a deviation of our gaze, from an austere modernity to a past that is still present, unforeseen, imprecise, uncertain, inconstant and open in its dynamic of incompleteness. A past that is still present and from which hypotheses for the future are drawn. A vibrant city of diverse, unprogrammed and diverse elements and densities that can acquire relevant iconographic values, as explored

Fedora is a city with a museum in which, inside, in glass spheres, we are shown all the cities that Fedora, for one reason or another, could have been, but is not. This possibility of recovering the "wishes" of what the city could have been captures Kublai Kahn's attention and sparks his imagination, thus sparing Marco Polo's life. Calvino, 1974, Publishers, San Diego, New York, London: 1978, 32–33.

⁵ Lynch 1960, 09-10.

by Denise Scott Brown and Robert Venturi in the city of Las Vegas.6

Forty to fifty years after these first ontological critiques of the Modern city, and after the proposals of the clash integration between Modernity and Tradition, we have recovered schizophrenic iconographies⁷ that swept through the late 1970s and 1980s.

After the rebuilding, up of the city ashes left by the massive destruction of the World War II we seem to have returned to the historical city, by the *reconstruing* and reconstruction of new ancient architectural models of the medieval city superimposed on the former post-war architectural brutalist structures. Those are the cases of the city centres rehabilitation of many German cities, such as *Altstadt Frankfurt*⁸, in which the city facades became scenographic stylish exercises, an ideal backstage for the accidental tourist, who distractedly, with his iPad, registers spatial sequences of a city without spaces

of delay, but of going through.9

We would like to propose to the reader working hypotheses, which imply the areas of urban rehabilitation, responding in a certain way to this idea of invisible sites to the circumstantial pedestrian, such as the accidental tourist. They are sites which, due to their apparent invisi-

⁶ Venturi and Brown expose the importance of communication when travelling along a linear route at moderate speed. Main Street in Las Vegas is characterised by its axiality rather than its transversal porosity.

I want to sketch a few of the ways in which the new postmodernism expresses the inner truth of that newly emergence social order of late capitalism, but will have to limit the description to only two of its significant features, which I will call pastiche and schizophrenia: they will give us a chance to sense the specificity of the postmodernist experience of space and time respectively. Jameson, 1983.

8 The historic centre of Frankfurt, which was destroyed on the fateful night of 13 February 1945 by Allied bombers, and later on rebuilt with new architectural structures from the seventies and the eighties, was "replaced" and inaugurated in October 2018, literally and on the basis of images and descriptions of the medieval age city of Frankfurt, as the new "ancient" pastiche architecture.

This new historic centre is made up of sixteenth and eighteenth century reinvented façades, representing a "new history", which is affirmed as a new tourist attraction with all its glamour of recovered historical exoticism. The interiors of these buildings, at ground floor level, are occupied by tourist souvenir and high class pastry shops, reproducing all the commercial offers typical of a theme park. The upper housing floor units, are empty, awaited by a resident population that does not want and cannot move to a place so densified by occasional tourism and whose purchase prices are unaffordable.



Fig.1 - Altstadt Frankfurt - Source: Author 2020

bility, are sometimes correctly or wrongly classified as urban voids, or as a result of an illegal and spontaneous occupation. We are not referring to the "terrain vague" concept of Solá-Morales¹⁰, or what we usually refer as being "urban voids". In fact these are not spaces waiting for any development, resolving and being generated by the "collision" of different urban structures, but on the contrary, by the rediscovery of areas, perhaps integrated into consolidated urban structures and of somewhat reduced scales, which, when "occupied", enable alternative connections and experiences to those previously existing. These latter ones have become marginal to the continuity of the commons. They are pockets11, with enormous potentialities of development, of reintegration in the commons and even of the creation of semi-public spaces, i.e., of access conditioned by their marginality and hierarchically "invisible" accesses. So that is to say, that unlike the fascination of the "terrain vague" sites, these others remain capsuled into the triviality of their invisibility, so that the eye (or the lens) captures the presence of the sublime, through its enhancing possibilities and definitely not its visual capture. The 1990s are now behind us, but the reality of the uncertainties caused: by the pandemic; by the return of the war; by the emergency of saving the planet; or by the strangeness caused by the global touristification of cities and places, forces us to look "inside" ourselves, to our cities and places that, although existing and being used, are still, or went back, to "non-places".

These spaces presuppose the existence of a consolidated and dense city with a complex public space structure. Therefore, these pockets must first be "discovered" and removed from their apparent "invisibility" in order to become part of the city through their rehabilitation,

¹⁰ Rubio, 1995.

The notion of "pockets" brings us to spaces on the fringe of the main urban structure but which can or may be easily related to it and even integrated with it. These spaces are spaces of silence, in the face of the bustle of the street or other primary space of the city's public structure. They may be interior blocks, interior gardens, service courtyards, vacant or waiting areas and are usually "invisible" in the city structure, revealing themselves, unexpectedly, as excellent opportunities to revalorize the public space. An example of this is the interior patios of *Chiado*, which, although always existing, had never previously been of public use until the implementation of the *Chiado* Masterplan by architect Álvaro Siza Vieira.



Fig.2 - Le Jardin Secret, Rue Mouassine, Marrakech - Source: Author 2016

the requalification of public space and the renovation and modernisation of their buildings. The levels of sharing, or publicity of these pockets, will depend on the physical conditioning factors and their urban form, but will also depend on what is intended with them in terms of their functional and symbolic programme¹².

However, although this is an approach to the consolidated fabric of the city, whether historical or not, its aim is not contextualist. On the contrary, these pocket spaces, reserved for the eyes of the nonfunctional pedestrians of the city, are a way of consecrating the space of "delay", for those who occasionally, but attentive, pass by and are able find it, or even a retreated space for the locals. However, being open collective spaces, they also are like semi-public rooms, because being public and of free access, they continue to be invisible in the primary and secondary structure of the public space network. They still have something of the *tábula rasa*, allowing for any new building condition to be surgical fully assembled in the history tissue¹³

The street is a room agreement. The street is dedicated by each house owner to the city in exchange for common services.

Dead-end streets in cities today still retain this room character [pocket space]. Through-streets, since the advent of automobile, have entirely lost their room quality. I believe that city planning can start with realization of this loss by directing the drive to reinstate the street where people live, learn, shop, and work as the room out of commonalty.

As an example of a space that is at the same time, close to and distant from the shopping street (in fact adjacent to it) is possible to find, in Marrakech, the example of *Le Jardin Secret*, with a discreet doorway to *Rue Mouassine*, one of the city's many bazaar streets, recently restored and open to the public. Its interior is completely enclosed and for that reason "invisible" to *Rue Mouassine*, and one enters through a anonymous door, unsuspected of connecting us to such a dazzling place. In this case the notion of *pocket*, associated with the idea of invisible space, reveals to us a calm space, of rest, of delay (of dwelling), tangential to one of the busiest commercial streets of that Moroccan city.

According to Tafuri, the crisis of modern science introduces a new historiography where, the historian, and for the sake of the argument, the architect, plays jig-saw puzzles, incorporating on those unexpected and fragmented new architectures, and in doing so, possibilities. One must abandon the path to discover what separates it from the other paths: the practice of power often occupies the unfathomable forest. This is what must be broken, "cut", traversed, over and over again. Tafuri, 1990, 13.

(...)

The street is a community room.14

Kahn's quotation introduces us to the problem. The street ceased to be a room, a *sharing* space, and became a simple means of communication. Even in historical centres, where the condition of essentially pedestrian access has been recovered, the space of community gathering has not ceased to be transformed into a chargeable space for "typical" experiences. ¹⁵

In fact, historic centres have been besieged by tourists thirsting to experience the exotic, experiences that are usually complemented with a significant "sprinkling" of beer. The accidental tourist, with little attention to the social and economic dynamics more endogenous to the cities he/she is visiting, cannot never achieved the fully perception (or understanding) of all the idiosyncrasies of those dense, physically consolidated centres. In the past, the urban mesh presupposed a network of connections and variability of routes, which, for reasons of more widespread use, consecrated specific points to the detriment of a quantity and diversity of places that will simply have been forgotten, in this new logic of traversing and visiting in a short time, and in a superficial or "schematic" way, the commons of any historical city.

The multiaxial street gave way to the uniaxial street. Referring to small and medium sized cities as examples, in which the argument is more visible and clear in its demonstration, and namely in the universe of southern meridional cities¹⁶, which suffered a considerable Roman-Arab influence in their historical urban structures¹⁷, we conclude on

¹⁴ Kahn, 1991, 265-6.

We specifically refer to the impact of tourism, as an industry that is continually consuming the space of sharing, in exchange for instantaneous leisure.

This term is linked above all, to cities where the midday sun shines from the south and located in the Mediterranean, which was the cradle of the cities of the great civilisations of antiquity.

The Islamic cities are structured on the basis of commercial streets, the bazaars and complementary tangential spaces of conditioned or even private access. These spaces, although invisible to the public space, are the most decorated and representative, making the courtyard an essential element in the sequence of urban space in post–Islamic southern cities around the Mediterranean. Hence the idea, in which Le Corbusier also drew inspiration, of a Mediterranean architecture, or even of Mediterranean urbanism, which due to its exacerbation and

the loss of streets porosity, that is, of the possibility of accessing or inflecting a city route through such varied places or spaces. That loss erases the possibility of turning any daily route into a unique experience and not only, with the influx and the structural "schematism" introduced by the "touristification" of these historic cities, into a (oneway) connecting or passing street. In other words, the city moves further away from Alexander Cristopher's theory in which the *city is not a tree*, and so that is to affirm that the city starts to adopt a tree structure, through the erasing of the connections that would allow for the *semilattice* network.¹⁸

The possibility of recovering, rediscovering or reinventing the invisible spaces of the city, and through this surgical and archaeological work on the continuity of the commons, allowing the latter to become "deeper" and "longer", recovers back these city purse's spaces, while it also mitigates the process of continuous gentrification in which these cities currently find themselves.

With the students from the Faculty of Architecture, University of

misunderstanding has been widely usurped as a typological model for countless tourist real estate operations in the south of the whole Iberian Peninsula. In the case of the Portuguese cities it is said that their structures, being a *quasi*-natural and intuitive adaptation to topography, are based on the synthesis between the Islamic irregular patterns and the roman regular ones, later on, and in some of the cases, restructured in the renascence period. Teixeira, 2012, 13-14.

- The *semilattice* structure introduces links between distinctive branches, introducing a complexity in the nodal topological structure of a system, creating new paths of different hierarchical levels. When translating this topology to an urban structure, one introduces numerous new possibilities densifying connections and enhancing the richness of the commons.
- Bill Hillier and Julienne Hanson elaborate on the depth of space in architecture, exploring the first urban agglomerations of humanity, to the agglomerations of indigenous peoples, as examples of the search for ever deeper spaces in order to respond to the achievement of intimate space in dwelling. The greater the depth of a space, the more are the intermediate and transitional spaces that we have to pass through to ultimately access it. Hillier and Hanson, 1984
- John Bockman relates the phenomenon of gentrification, as a the one of the gradual abandonment by resident populations of their "usual" address, to more general and widespread phenomena such as that of a diverse "cultural" colonisation. The author argues that this phenomenon is due to the "battles" of the "multiple globalisations" that are now recurrent in most of the neighbourhoods of our cities.





Fig.3 – Public spaces network and students survey of the "invisible spaces" within Lagos city center (class of 2021–2022





Fig.4 - Rua Direita of Lagos - Rua 25 de Abril - Source: Laser scan image obtained by Professors Luís Mateus and José Vítor Correia, responsible professors for the Modulation Lab at the Faculty of Architecture, University of Lisbon 2022

Lisbon (FAUL), we proposed new uses for those invisible spaces, allowing for a gentrification counter movement and also for the complexification of the urban pedestrian pattern. In the Portuguese city, the main street, or rua direita (straight street), has been, with the Praça do Município, the public space of reference. It was where the main "commercial houses" were located and often where spontaneous street markets took place²¹. The straight street of the Portuguese city, not necessarily being straight, established a direct connection between city gates, i.e., it was a route that crossed the whole city²². This centrality justified its transversal porosity, thus denying a simple axiality to convert it into the referential place of the city. The traces of the "straight street" remain, more or less evident, in small or medium sized Portuguese cities or in the historical centres of larger cities. Although its referential sense may have lost importance for other areas, a certain sense of "monument" of the past remains, through its "magnetism" guaranteed by its historical originality and centrality in the urban fabric. This "magnetism" is reinforced in the "beer house" or in the "wine tasting bar", in the tourist shop of pseudo-artisanal souvenirs, eventually by the paradigmatic Handicraft Museum or even by any other tourist-cultural activity.

The *rua direita* remains as a "commercial" street, but the consumer has changed, the permanence and use has also changed, the street has acquired a "typical" or exotic character of a culture proper to a place emptied of its endogenous population and filled by another that was, in the past, "foreign". In other words, we are witnessing a redefinition of the southern city through, and essentially, the reuse of public space. Lagos is an example of this, *Rua 25 de Abril* has become a showcase of tourists, and the different languages that echo and fill that space give a hint of a varied cosmopolitanism, perhaps never before experienced, not even at the time of the *Infante*, when Lagos was a city open to the world with the "Discoveries".

The total number of residents in Portugal decreased from 2011 to

²¹ Teixeira, 2012, 44-51

Direita means straight, while *direta* means direct. The word has the same route but has a slightly different meaning, and in this case the old word was kept to the detriment of its meaning.

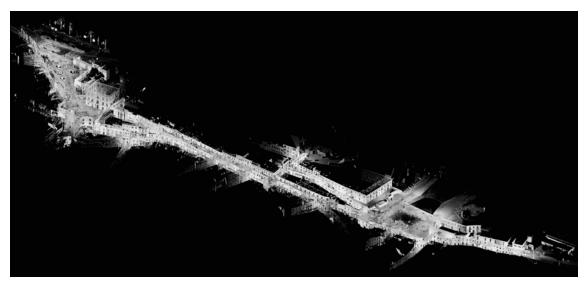


Fig.5 – example of Francisco Calha's (student at the FAUL) Master Final Project. Viva Voice took place in January 26 at the FAUL. The model shows the relation between Calha's design and the main pedestrian access to the former municipality square (image on the left) and the way in which the new proposed buildings help defining the newly integrated "invisible space". The project proposes a public library and accessible housing using a construction system based on local stone as a structural element

2021, but the Algarve (with the metropolitan area of Lisbon) have been the region where there was an increase contrary to all the others, much at the expense of new foreign residents.²³

Between 2011 and 2021 the population in the Municipality of Lagos grew 7,89%²⁴, more than the average growth for the entire Algarve, which is 3.86%²⁵. From a statistical consultation to an architecture office in Lagos²⁶, of considerable size (20 employees), we concluded that in the same period of time, between 2011 and 2021, counting Housing projects only, this office started and completed²⁷ 136 collective dwellings and 36 single family houses, only in the parish that corresponds to the city of Lagos and surroundings²⁸. Another 28 single-family houses have been developed for other parishes in the Municipality of Lagos during the same period of time. At this moment, this office is working on the design projects for other 170 dwellings for the most urban parish in the municipality, to be completed in the next two years, and another 280 dwellings to be started in the present for the same geographical area.

While single-family homes vary in typology and size, ranging from 350,00 to 1,500,00 square meters, dwellings in collective housing build-

²³ According to the *Portuguese National Institute of Statistics*' (INE) inhabitants survey updated to 2021, the Algarve was the region that contributed the most to new residents of foreign nationality, and in the municipality of *Lagos* the foreign population already represents 23.4% of the total number of residents.

From 31.049 to 33.500 inhabitants (same source).

Source: INE. Of all the Algarve's municipalities, the one that grew most in number of residents (8.73%) was Vila do Bispo, with a current total of 5717 residents. This is followed by Albufeira with a growth of 8.18% and a total of 44168 residents, and then Lagos with a total of 33500 residents (six times more than Vila do Bispo). Portimão, with a total of 59867 residents grew by 7.65%. These neighbouring municipalities are all located in the Western Algarve and all of the other Algarve municipalities grew by less than 5.55%, with four of them (Olhão, Vila Real de Santo António, Castro Marim and Alcoutim, all in the Eastern Algarve) losing residents.

²⁶ For data protection reasons, we are keeping anonymous the identity of the architectural office.

From the beginning of the Design project to the opening day of the built work.

²⁸ Parish of São Gonçalo de Lagos, resulting from the union of two urban parishes, São Sebastião and Santa Maria, which includes the historical centre of Lagos and outlying growth areas.



Fig.6 - Orthophoto Lagos' map -Source: Municipality of Lagos

ings are mainly two and three bedroom apartments, whose sale prices range between EUR 450,000.00 and EUR 1,200,000.00²⁹. The same source tells us that 90 to 95% of these dwellings are bought by new residents of non-Portuguese nationality. In other words, the tendency for the foreign population to increase, in the specific case of the Lagos municipality and its city, will continue, and it is also natural that the same will happen in a generalised way throughout the Algarve, and maybe even throughout Portugal, although with a lower prevalence than has been seen and will continue to be seen in the Algarve.³⁰

This real estate process contributes to an acceleration of the gentrification process in the city of Lagos.

Final Remarks

Taking these new possible dynamics of Lagos' urban space, we focused on interventions in areas that enhance and restore the missing porosities to *Avenida 25 de Abril*. A group of 5th year Master of Architecture students, were assigned an academic design project to identified inviable spaces, considering the issue of mitigating the emerging phenomenon of gentrification. The functional programme was open and included the redefinition of new residential areas with the reconfiguration of Lagos waterfront, which since October 2020 passed to the administration of the Municipality³¹.

Lisbon.

In the final year of the Integrated Masters in Architecture at the University of Lisbon's studio, students have explored numerous possibilities and solutions, for the restructuring of the *Avenida dos Descobrimentos* together with the reconfiguration of the invisible spaces in the

²⁹ Data provided by the architectural firm we consulted.

These data, although insignificant in relation to the total number of urbanistic operations licensed in Lagos, are indicators of a trend that reveals a growth in luxury commissioning in Lagos, which is not very affordable for the middle class in Portugal.

³¹ The port area was under the administration of the Port Authority and included the whole area of the embankments inaugurated in 1960 and which shape the *Avenida das Descobertas*, as well as the regularization through the introduction of two docks on the eastern bank of *Ribeira de Bensafrim*.

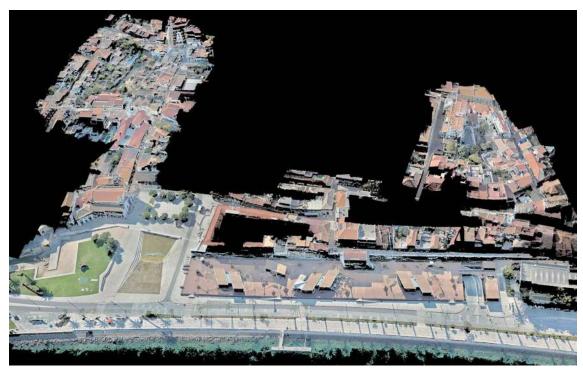


Fig.7 - Photogrammetry of two "inner" blocks, on the west side of Rua Direita, and the water front, on the east side of Rua Direita - through the "programmatic linkage" of both the east and the west side of Rua Direita it is possible to reclaim a new porosity for its - Source: Image obtained by Professors Luís Mateus, José Vítor Correia (computer generation), and Diogo Matias Ravara (drone's photographs) 2021

interiors of two city blocks to the west of *Rua 25 de Abril*. These three different sites enabled the connection between the densest centre of Lagos and its riverside area, introducing a new porosity across its main street, *Rua 25 de Abril*.

Solutions and new building typologies were also explored, both commercial and residential, on the two banks of the *Ribeira de Bensafrim*, mitigating the effects of the average rise in water level, thus responding to the United Nations Sustainable Development Charter 2030. .

The return of these new spaces, invisible until today, creates new occupation opportunities to new residents, confirming the gentrification phenomenon, on the one hand, and mitigating it on the other, being, as it is, inevitable its continuous accentuation in a city with the attraction of Lagos. But if this new colonization of the invisible territories of the city of Lagos, allows a healthy gentrification, its implementation reconsiders the use of urban space as different spaces of "delay", internal and of historical belonging to its urban structure. Its devolution, with the new transversal connection to a consolidated centre (which was previously uniaxial and centred on its right street), the creation and devolution of new communal spaces, responds also and very specifically to the challenges from here on, in with compulsory confinement, as a response to epidemics and more broadly to new pandemics.

The spheres of the students' imagination are visible in the new *pockets* of the city, which by extending the public space reinvent the visibility, reading and meanings for the new ways of dwelling in the city.

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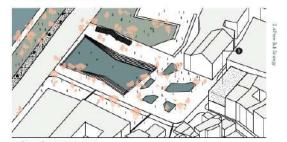
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Fig.8 – Master Plan for the enhancing of the axis of Avenida 25 de Abril, with the complementary adjacent spaces/ squares/streets in order to respond to capture and enhance new spatial possibilities through *water traces*. Project developed by Roberto Montisano in *Laboratório de Projeto VI*, FAUL, fall semester 2021



2022 O pátio central como coração da comunidade: espaço público vivo com olhos desde todas as habitações e escadinh



2122 O pátio central como cais: O conjunto adapta-se à elevação do nivel do mar, mudam usos e aumentam as habitaçõe

Fig.9 - Lagos 2021 and 2121 - final renderings from the design project final submission for Laboratory VI (first semester), studio A, 5th year Architecture Master Degree, Faculty of Architecture, University of Lisbon - Source: Ane Txintxurreta Ballina, Gina Susanna Viladot and Selva Vallverdú Gavira students' work 2022

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"Rua": Heritage and Identity. Case study: "Rua do Salitre" street, Lisbon

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Abstract

A reflection on the history of cities leads us to the importance of urban morphology. The objective of this study is the analysis of urban morphology in the cultural landscape and its possible attribution as a cultural value in Portuguese legislation. The choice of the urban street "Rua do Salitre" as a case study is due to its integration in the historical development of the city. The production of urban design in Lisbon – as in other cities - was based on "addition, overlap and sedimentation". The implementation of the "Plano das Avenidas Novas" in the pre-existing urban matrix configured a process of overlap, with Rua do Salitre, with its winding layout, typical of rural routes leaving the city, a surviving street from the previous urban order, contrasting with the majestic "Avenidas Novas" blocks, with their wide and straight streets. The cultural landscape of this street, as the sum of urban morphology and architecture, has inherent contradictions: the architecture follows the "new rule" of building on par with "sophisticated" neighbors, while the urban layout maintains the morphological logic of the matrix. The methodology used was based on a comparative analysis of Rua do Salitre with other streets of similar architectural style and construction but with different urban morphologies. The results showed that, in terms of the internal logic inherent to an "architectural collection" with these characteristics, Lisbon may have other better examples, but the urban aspects of Rua do Salitre have features that set it apart from the others. The Rua do Salitre is simultaneously integrated into two temporally distinct systems. The cultural landscape of this street, being the sum of urban morphology and architecture, has inherent contradictions: the architecture follows the "new rule" of building to rent in art deco or modernist style, while the urban layout maintains the morphological logic of the matrix. In the final considerations, we reflect on the relevance of the criteria for valuing cultural heritage provided for in the current heritage law, which neglect urban morphology as an essen-

tial component, a situation that, in our opinion, should be rethought.

Keywords

Urban morphology, cultural landscape, cultural heritage, Portuguese legislation.

Introduction

The concept of heritage as a cultural asset has been reconfigured over time, just as the natural or built landscape (including buildings and urban fabric) inherited from the past has been understood differently from generation to generation. This fact leads us to question the urban regeneration/rehabilitation/renovation and re-functionalization works carried out in the past. It is also likely that today's interventions will be scrutinized in the future (Tomé, 2018), both in terms of intervention and the foundations that determine the categorization of certain "cultural assets" to the detriment of others.

The practice of preservation is founded on national law, whose guidelines are stated in the Charters, Conventions, and Recommendations of international organizations, «representing attempts that go beyond the establishment of rules and procedures, creating and circumscribing concepts that at times are global and other times are local. » (Cury, 2007, p. 7) (T.A.).

The cultural aspect of the urban environment appeared in 1975, through the Declaration of Amsterdam, which stated that the concept of heritage should extend to city centres and cities of historical and cultural interest. (Cury, 2004).

The respect for cultural heritage comprised by old city centres, as a historical document of a certain culture at a certain time, can potentiate/recover the memory of cities, thus their identity, their "genetic code". The strategy of preservation of "urban groups and areas" is, therefore, a key factor in citizens' identity link, and is even provided for in Portuguese legislation (Law 107/2001, and Decree–Law 309/2009), namely, in Article 2(1) of the Law establishing the foundations of the cultural heritage protection and valuation policy and framework, when it states that «cultural heritage includes all assets that, being records with civilization or cultural value and holding relevant cultural interest, should receive special protection and valuation»; 'relevant cultural interest, is specified in paragraph 3 of the same article as «historical,

paleontological, archaeological, architectural, linguistic, documentary, artistic, ethnographic, scientific, social, industrial, or technical.».

However, it is observed that this has not been current practice in Portugal to move for the general preservation of urban groups or areas, while there is also an over-valuation of architectural objects as "singular objects of art and science." One example of that is the fact that, of the 20 Portuguese sites registered on UNESCO's List of World Heritage, there are only five city centres.

The analysis of the UNESCO classification criteria reveals the overarching role in safeguarding the "urban landscape", wherein urban morphology is an important component, as stated by Safe and Pereira Costa (2015). However, Portuguese cultural heritage legislation contains no mention of urban morphology as a criterion of heritage valuation.

Urban Morphology: Production and constituent elements

The production of the urban layouts of cities – including Lisbon – is the result of «the sedimentation of operations that occur in a process of gradual accumulation, whether through the addition of parts or overlapping strata». (Fernandes, 2014, p. 67). (T.A.).

In the case of "overlapping urban grids", as Fernandes informs, the combination of grids occurs with the overlapping of alignments, sometimes verifying contradictory orientations, «both centers being articulated through the imposition of the hierarchy of one of the parties over the other». (Fernandes, 2014, p.132). (T.A.). The street "Rua do Salitre" is integrated into the "dominated" grid, the dominant grid being the one that resulted from the "Avenidas Novas" Plan.

The urban layout that defines space is part of the urban fabric, which, according to Carlos Dias Coelho «expresses the reality of the built city, a material with real and temporal existence, which inextricably includes space and buildings, public and private, that is, the streets, plots of land, buildings, infrastructures, etc., that is, the entire physical city.». (Coelho et al, 2015, p. 14). (T.A.).

From the public component, the street stands out "as an integral common element" and the square as an «urban element of exception and representation»; and from the private component, the block as an «aggregation unit», the plot of land as an «element unit», the common building as an «identifier of the majority of the built fabric» and

the singular building as «collective expression and greater representation». (Coelho et al, 2015, p. 32). (T.A.) It should be noted, however, the particularity of the building, because despite being an element of private space, it has a public component, insofar as the "urban facades" make up the image of the city.

The study case and methodology

The objective of this work is to observe urban morphology in a real context as an essential attribute in the assessment of the distinctive features of cultural heritage.

The study case is the "street" as a structuring element of the urban fabric, more specifically the street "Rua do Salitre", between Largo do Rato and Rua Nova de São Mamede, in Lisbon.

From a dirt road for accessing cultivated land to an urban street within Lisbon's city centre, this place has seen many changes as part of the city's development. Briefly, the following uses are known agricultural area, area for extraction of potassium nitrate (called "salitre"), housing area during the construction of the "Águas Livres" aqueduct, shanty town to house those made homeless by the earthquake of 1755, industrial area, and finally, consolidated urban area.

The development of the name of Rua do Salitre parallels the place's historical course. Among the various name, there is "Rua dos Cartuxos", because the farm of the Cartuxos monks was located there, and "Rua do Salitre", which persists to this day.

The new urban plan in the form of the Avenidas Novas – from the end of the 19th century and beginning of the 20th century – caused profound changes to the city's urban morphology; the new Avenida da Liberdade and its adjacent square blocks were woven together with the old urban fabric. Rua do Salitre is a singular example of that weaving of morphologies, contrasting its winding route and narrowness with the "new neighbourhood" of broad, straight streets.

Architecture integrates the built fabric and is the most representative collective expression in private space, defining the public image of the city. But the architectural styles are permeated by the taste of society, which changes according to trends, often appearing as mere "façade", like a cloth that covers the building.

This reason explains that the architectural filling in of Rua do Sali-



Fig.1 – Rua do Salitre and Rua Nova de S. Mamede in 1812, according to the map made by the Duke of Wellington – Source: Lisbon Municipal Archive

tre, carried out in the 1920s and 30s, followed the "new norm" of buildings for rental (due to a lack of housing) in the art deco and modernist styles, just like its neighbors, a little more modest in scale and decorative sophistication but not in innovation; indeed, there are a few very valuable examples designed by Cassiano Branco.

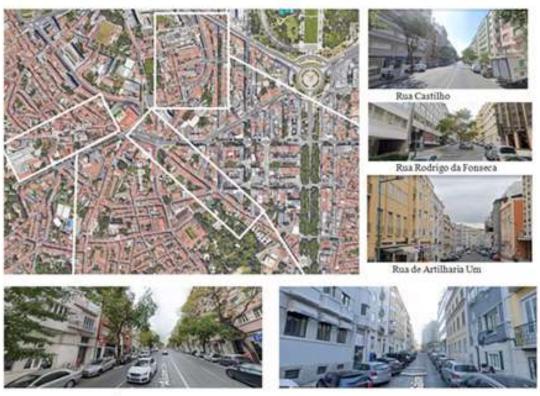
The methodology was based on a comparative analysis of Rua do Salitre with others that have an affinity in terms of buildings, whether in style or construction. Examples are Avenida Pedro Álvares Cabral, Rua Artilharia Um, Rua Rodrigo da Fonseca, and Rua Castilho. The comparison of these streets was based on nine analysis criteria, based on elements of public, private and mixed space, as well as the value attributed to individual buildings or groups of buildings. The elements of the public space observed were the urban fabric and the profile of the "street" element. From the private space, it was verified the size of the plots of land, the presence of singular buildings, the scale and the implantation of the buildings in the plot. Regarding the mixed space, the stylistic differentiation (modernist/art deco) was considered, as a building constituting a private space, but also a public space. Regarding the assigned value, the presence of classified heritage was observed, or municipal heritage value was attributed in the Municipal Master Plan.

Comparative analysis with other streets

The choice of urban groups to be compared was based on the matrix carried out by Vera Higino (2013), who divided this architectural phase into sectors and sub-sectors based on morphological specifics.

According to Higino (2013), the group of buildings on Rua do Salitre, located in the Western sector, is like the groups on Avenida Pedro Álvares Cabral and Rua Artilharia Um, Rua Rodrigo da Fonseca, and Rua Castilho, marked in Figures 2 and 3.

As Higino states, «on the western side of Avenida da Liberdade, the Barata Salgueiro district of the end of the 19th century linked the new street with the ancient sites of Rato and S. Mamede, but left the block limited by Rua do Salitre and Rua Nova de São Mamede unfinished; this was consolidated only in the mid-1930s, and today we find here a set of modernists [and Art Deco] buildings. Also, the connection made in a straight line between Rato and Jardim da Estrela, Avenida Pedro Álvares Cabral, is characterized by two constructed fronts in the same



Avenida Álvares Cabral Rua do Salitre

Fig.2 – Location and street photographs under study – Source: Google Earth

style.». (2013, p. 17). (T.A.).

At this time, a vast area west of Parque Eduardo VII (Edward VII Park) would come to be built up in a modernist style: Rua Artilharia Um, Rua Rodrigo da Fonseca, and Rua Castilho were almost exclusively limited to upper bourgeoisie districts filled with modernist and/or art deco buildings that observed the communal allotment of the new extension zones of the Avenidas Novas Plan (Higino, 2013).

Avenida Álvares Cabral was created as a «straight line between Rato and Jardim da Estrela». (França, 1980, p. 84) (T.A.), where Pedro Nunes High School had been since 1909; it opened in the 1930s, becoming filled with buildings charging high rents.

The street, of considerable width, has plots of reasonable size, and some buildings are grouped together near one of the ends. Regarding buildings from the 1930s, there are many examples of modernist architecture and only a few in the art deco style.

Regarding the Municipal Heritage Charter, besides the listing of the "Old Jardim Cinema Building, namely, the Monumental Games Hall Area", "Old Pedro Nunes High School, currently Pedro Nunes Secondary School, including the gardens, playing fields, the sports hall and the refectory" and "Buildings of the Museum and João de Deus Kindergarten, designed by Raul Lino", there are one architectural group and seven valuable buildings listed, including one Valmor prize-winner.

The group of Rua Artilharia Um/Rua Rodrigo da Fonseca/Rua Castilho, within Avenidas Novas, has generous street profiles, with centrally planted pavements and many modernist buildings, with some examples of the art deco style.

The similar scale of the buildings and their grouped construction create a great urban coherence. The relationship between the blocks and the recurrent modernist style of the buildings defines it as a "district", although it was not originally designed as such. Regarding the Municipal Heritage Charter, besides "Edifício Castil", there are listed an architectural group and five valuable buildings, including one Valmor prize-winner.

The set built on Rua do Salitre consists of "buildings in continuous band", described as "buildings with adjacent facings, with generally constant façade height and depth".

It is bounded to the north with the confluence of Largo do Rato and





Fig.3 - Location of the three areas under study and urban morphology - Source: websig.cm-lisboa.pt)

TYPOLOGY OF ANALYSIS	ANALYSIS CRITERIA	RUA DO SALITRE / RUA NOVA DE SÃO MAMEDE	AV. ÁLVARES CABRAL	RUA ARTILHARIA UM / RUA RODRIGO DA FONSECA / RUA CASTILHO
PUBLIC PLACE	specificity of the urban fabric	traditional	planned street	urbanization plan of Avenidas Novas
	street profile	narrow	wide	wide
PRIVATE SPACE	plot of land size	narrow	mixed	wide
	scale of buildings	small	medium	monumental
	implantation of buildings in the plots	Terraced, one exception	Terraced, some exceptions	Terraced, some exceptions
	presence of unique buildings	Cassiano Branco; Jacinto Robalo	Cassiano Branco	
MIXED SPACE	stylistic variety (modernist/art deco)	Distributed evenly	Modernist type predominant	Modernist type predominant
ASSIGNED VALUE	municipal heritage	Yes	Yes	Yes
	existence of classified heritage	Yes	Yes	Yes

Fig.4 – Summary table showing characteristics of the streets marked

Rua Alexandre Herculano; to the east by two blocks with a traditional urban morphology (comprising, one by an irregular triangular polygon made of Rua do Salitre, Rua Alexandre Herculano, and Rua do Vale do Pereiro; and the other, by an irregular rectangular polygon made of Rua Alexandre Herculano, Rua do Salitre, Rua do Vale do Pereiro, and Rua Rodrigo da Fonseca) and the first district designed after the opening of Avenida da Liberdade, Barata Salgueiro District or Rua de Braamcamp District (Salgado, 2006); to the west by a mega block in the shape of an irregular rectangle made by Rua da Escola Politécnica, Rua do Arco a São Mamede, and Rua de São Bento, and Largo do Rato; and to the south by a mega block of irregular urban occupation, containing Lisbon's Botanical Garden.

In the area surrounding Rua do Salitre, the Palácio Palmela is listed (including the garden terrace), located at Rua da Escola Politécnica.

Regarding other immovable cultural assets of special interest identified in the Municipal Heritage Charter, there is one architectural group that includes the section of Rua do Salitre referred to here.

Figure 4 is the summary table showing the characteristics of the three sets of buildings and streets being studied based on the nine preset criteria.

The comparative analysis of the pre-established criteria reveals the characteristics of the buildings associated with the respective urban matrix, whose synthesis can be seen in Figure 5.

In the case of the sets on Rua Artilharia Um/Rodrigo da Fonseca/Castilho, the urban fabric, both in terms of the public aspect – design and profile of the "street" – was the result of prior planning, having a straight and wide profile, as well as being private, with regular plots and considerable width, whose contiguous buildings defines monumental sets, with the presence of singular buildings. In stylistic terms, the modernist predominates, conferring homogeneity.

Regarding Avenida Álvares Cabral, the characteristics of the public side have been maintained since the street was designed. However, on the private side, there is a heterogeneous plot of lot, with the simultaneous presence of wide and narrow plots, with different geometry, whose adjacent buildings defines sets with a heterogeneous scale, with some monumental sections and others more modest. There is also the presence of singular buildings. In stylistic terms, the modernist predominates, conferring homogeneity.

On the other hand, on "Rua do Salitre", the configuration and narrow and winding profile of its agricultural genesis are maintained, with narrow plots and a reduced architectural scale due to the narrowness of the plots, since the height of the buildings is practically like the other sets. Regarding the architectural styles present, it presents greater diversity, with a more equitable distribution between the modernist and art-deco styles.

In summary, it was found that, in terms of coherence and internal logic inherent to what is called an "architectonic ensemble", the sets of streets "Rua Artilharia Um/Rodrigo da Fonseca/Castilho" present higher quality as examples of a historical period, both in terms of city

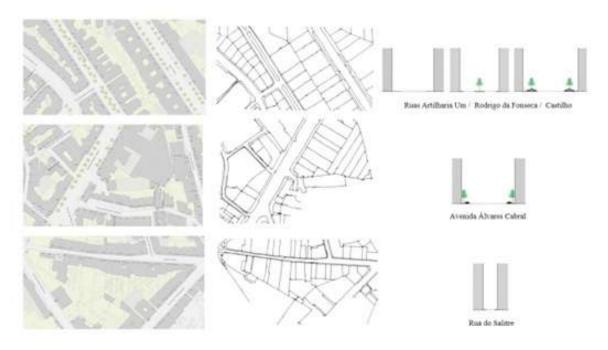


Fig.5 – Plots of land design and street profiles under study – Source: Plots design: Lucinda Caetano; Profile drawing: Mora Barroso

and architecture.

However, the street "Rua do Salitre" – as opposed to its surroundings created by the "Avenidas Novas" Urbanization Plan – contains a remarkable singularity, due to its integration into the morphological matrix.

Final Considerations

The results showed that, in terms of the internal logic inherent to an "architectural collection" with these characteristics, Lisbon may have other better examples, but the urban aspects of Rua do Salitre present characteristics that differentiate it from the others.

The street "Rua do Salitre" is simultaneously integrated into two temporally distinct systems. The cultural landscape of this street, being the sum of urban morphology and architecture, has inherent contradictions: the architecture follows the "new rule" of building to rent in art deco or modernist style, while the urban layout maintains the matrix morphological logic.

It should be noted that article 17 of the Law on the basis of policy and regime for the protection and enhancement of cultural heritage (Law 107/2001) on the generic assessment criteria for the "classification or inventory, in any of the categories referred to in article 15, shall take into account one or more of the following criteria: a) The property's matrix character; b) The genius of the respective creator; c) The interest of the property as a symbolic or religious witness; d) The interest of the property as a remarkable testimony of experiences or historical facts; e) The aesthetic, technical or intrinsic material value of the property; f) The architectural, urban and landscape design; g) The extent of the property and what is reflected in it from the point of view of collective memory; h) The importance of the property from the point of view of historical or scientific research; i) Circumstances likely to lead to a decrease or loss of the perpetuity or integrity of the property.".

Thus, urban morphology is not one of the attributes of heritage enhancement, despite urban morphology being linked to the historicity evidenced in the "urban landscape".

Furthermore, it is an urban element that identifies communities and is recognized as such by citizens.

In conclusion, it is considered that the criteria for valuing cultural heritage provided for in the current heritage law neglect urban morphology as an essential component, a situation that in our opinion

should be rethought.

Acknowledgements

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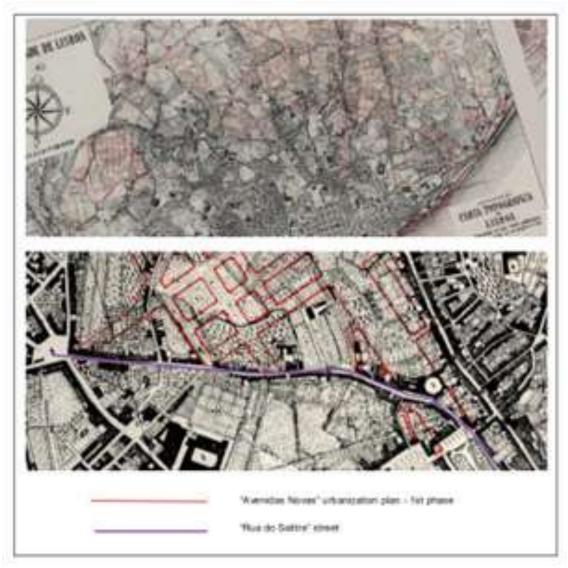


Fig.6 – The historical cartography – Source: Lisbon City Hall, 1871

The role of historical streets in the urban development of the city of Piacenza

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Abstract

The role of the street has witnessed, over time, its progressive reduction as a urban structure capable in the past of generating forms of the inhabited space. The functional assumption of the modern city has transformed the street into an artefact of the exclusive domain of engineering, and for many decades urban plans have been drawn on categories of functional taxonomy of the street. In this regard, the essay develops a critical reflection on the case study represented by the city of Piacenza, intended as a paradigmatic case, through three different street layouts that have profoundly affected the urban morphological structure of the city:

- · the ancient consular street of the Via Emilia;
- · the old medieval route of the Via Francigena;
- and finally, the modern viaduct of the A21 (TO-BS) motorway.

The theoretical reflection is methodologically structured through a critical reading, both on a urban and territorial scale, of the strategic role that the three different roads have played over time in defining the morphological configuration of the Emilian city, and how it has become today not only a junction city for the entire Po Valley region, but also a crossroads and logistic centre for the commercial flow of Cisalpine Europe.

The objective, of the case study examined, is to investigate the relationship of cause and effect played by the road in the urban evolution of the city and its different temporal rhythms scanned.

Keywords

street, architecture, infrastructure, landscape, territory

The road as a construction element in the construction of the urban form has witnessed, in modern times, its progressive reduction as a fundamental element in the construction of the city. The design of new road infrastructures, in recent decades, has increasingly been the focus

of engineering disciplines that have made it the object of their own specialisation. Despite the condition of sectorisation determined over time, the road can still be read today "in its double value of architectural object and of constitution of a point of view on the landscape and on the organisation, just when more critical and ambiguous has been its presence, more uncertain has been its task in relation to the context, since it abandoned its role of constitutive layout of the urban system" (Gregotti 1989). In this regard, there are many examples throughout the last century, as Gregotti himself in his editorial in the Casabella issue "Sulla strada" wrote about the experiences that attempt to relocate the street within the disciplinary statute of architecture. After the first experiences of the modern movement with Ludwig Hilberseimer's Grosßstadt project in 1925 and Le Corbusier's motorway-building project for Rio de Janeiro in 1929, in the 1950s and 1960s the researches by the British group of "The Architectural Review" and the group at M.I.T. from Boston together with Kevin Lynch, author of "The Image of the City" were carried out. They both had the merit of opening a wide-ranging discussion about the morphological components of the man-made landscape, including the theme of the road in the foreground.

Let us remember that the modern movement entrusted to the returned nature the role of mediation between two different independent systems, the urban context system and the one referred to the road layout, both belonging to different functions and only subsequently put in relation to each other. "What Le Corbusier predicted in 1929 has come true in many parts, but the fact that large infrastructures have been built for separate logics has been fatal precisely to the city and the landscape they were intended to serve" (Gregotti 1989). Often, in fact, urban transformations have been developed according to a merely functional logic of the road element through the taxonomy of different possible categories: freeway, motorway, ring roads, road junctions, without succeeding in defining a settlement logic with the context concerned, determining caesuras within the city, but also in contexts on a wider scale such as those on a territorial one. More than a century after the first experiences formulated by the modern movement, the question is: can the road today be configured as a device capable of infrastructuring new urban transformations and on a territorial scale? If so, can the road be considered an architectural artefact so that it can be



Fig.1 - Morphological system of the city of Piacenza - Source: ©Lab OC-OpenCity 2012

placed within the specific competence of architecture, not only of a technical-functional engineering nature? (Fig. 01)

1. The road in the historic city: the ancient consular street of the Via Emilia.

For the historical city, the road has been the basic element of relationship between the morpho-logical fabric of the built space and the open space in its different and possible formal categories - squares, open spaces, parks, etc. -. The road is an element of the urban construction capable of highlighting the different characters of the city not only through the spatial configuration, but also through the temporal dimension, as it is testified for example by the Via Emilia (Aemilia), the consular road of the Roman Empire, whose construction works began thanks to the will of consul Marcus Aemilius Lepidus and were completed in 187 BC, connecting the city of Rimini (Ariminum) with the city of Piacenza (Placentia) through Bologna (Bonomia). Over time other Roman colonies - Modena (Mutina), Parma (Parma), Reggio Emilia (Regium Lepidi), Cesena (Caesena), Forlì (Forum Livii) - were founded along the route of the consular road. Over time, this road has become a historical infrastructure, with its more than 230 km, structuring the entire territory of the Po Valley. The Via Emilia, as well as defining the decumanus on the urban scale of the city of Piacenza along what is now Via Roma, the entrance to the historic centre, it also forms a real decumanus on a territorial scale along the entire region up to the Adriatic Sea. The route of the consular road is also an expression of the identity culture of Emilia-Romagna. (Fig.02, Fig.03)

2. The old medieval route of the Via Francigena

During the year 1000, the city of Piacenza acquired a strategic economic and commercial role thanks to its position along the Via Francigena, also called Via Romea or Via Francesca, which connected Canterbury to Rome and was in the Middle Ages one of the three *peregrinationes maiores* together with the ones that led to the Holy Land and Santiago de Compostela. After the fall of the Roman Empire in the 5th century A.D. and the subsequent barbarian invasions, the consular roads lost their strategic role in connecting the provinces of the empire, progressively falling into a state of neglect together with the rest of the urban



Fig.2 - Road system of the city of Piacenza - Source: ©Lab OC- OpenCity 2012

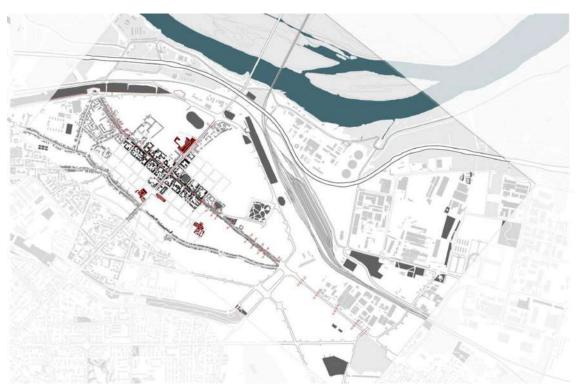


Fig.3 - Cardo and decumanus system of the city of Piacenza - Source: ©Lab OC- OpenCity 2012

system of the cities, which turned out to be oversized for its inhabitants. The 'dark ages', as they were defined by Francesco Petrarch, from the 7th to the 10th Century, marked by the disintegration of what remained of the empire, "opened the field to a very wide, unprejudiced, ingenious experimentation, which in the long term became the foundation of a new material and mental civilisation. (...) and from the traditional geography of the Mediterranean world emerged the new historical reality, which since then it has been called Europe" (Benevolo 2011). The geography of the ancient world opens the door to the construction of a new history of the European continent. The new social and economic fabric of the late Middle Ages found space in the already urbanised territories by readapting and recovering the ancient built heritage of infrastructure (roads, aqueducts) and public architecture (theatres, amphitheatres, basilicas). In this climate of a new cultural and artistic season, which no longer represented strong central powers, but rather political events of a regional nature, expressions in nuce of the future culture of European states, the Via Francigena took shape, passing through the capital of Piacenza. It was not until the 10th century that the name of the Via Francigena appeared for the first time in documents, through the discovery of Archbishop of Canterbury Sigeric's diary written during his return from Rome. The name used to identify not just a road, but a route made up of a network of different roads branching off into a feudal territory, only partly built ex-novo by the Lombards and reached the capital of their kingdom by means of a safe connection, Pavia, with Tuscia and the duchies of Spoleto and Benevento, creating the 'Via del Bardone', by passing the Apennine ridge at the Cisa pass. A system of roads was built through the integration and succession of other local road segments, abandoned and reused over the centuries by considering the environmental conditions and historical contingencies. Unlike the consular roads of the Roman Empire, which were all officially named - Via Appia, Via Aurelia, Via Cassia, Via Emilia, etc. - the medieval roads were recognisable by their toponymy. - were recognisable by the toponymy defined by the environmental and geographical characteristics of the areas crossed. Often, in fact, the route branched off especially at the Alpine passes, also changing its name. With the Franks, the "Via del Bardone" was extended as far as the North Sea, across the Alps, giving rise to the so-called Via Francigena, which was the main route between the new Europe and the Ancient World of the Mediterranean, connecting the two seas of the continent, the Mediterranean sea and the North one. The Via Francigena became the route, the axis, from the limes of the Germanic lands to Rome, the eternal city.

The Via Francigena is the expression of the relationship between "document-monument" [8] expressed by Le Goff. In the case of the Via Francigena, Arcibishop of Canterbury Sigeric's diary written during his return from Rome is configured as a document, while the places crossed by the road itself interpret the concept of monument, in the sense of the choral value of a sphere wider than the single work of art. In this way, the cultural armouring is constructed not only refers to the medieval city of Piacenza, but also to its territory, through a landscape considered as an imprint and at the same time as a matrix, capable of defining an identity of European cultural heritage.

The Via Francigena, a path before being a road, is not only the route that connects the two seas, the North and the South sea, the Mediterranean, but a route that marks a temporal itinerary that goes from the Greek-Roman world, through the Middle Ages and the following historical periods, up to today. A great road axis (cardo) on a continental scale, marking a space-time sequence between different places crossed in the different historical periods of the formation of the European cultural identity, marked by heterogeneous values represented by the Middle Ages local autonomies. The Via Francigena still represents a crossing of the cultural depth of time, an infrastructural trace of the identity of our old continent of which the city of Piacenza is a physical-spatial expression. The route of the Via Francigena crosses the centre of the historic city, touching the old Roman castrum and setting up a series of squares and open spaces in sequence, together with churchyards along the way. From the Basilica of Santa Maria di Campagna to Piazzale Roma, passing by the church of Sant'Antonino.

3. The role of the road in the modern city: the modern viaduct of the A21 (TO-BS) motorway.

One of the consequences of the architectural and urban culture of the 20th century, which dogmatically converged in the IV CIAM Congress in of Athens in 1933 and was subsequently sanctioned in 1943 in the

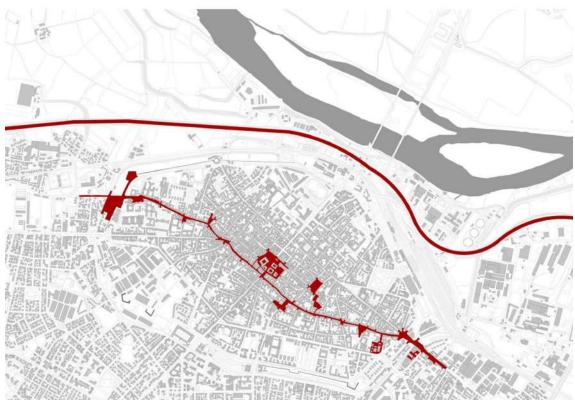


Fig.4 - Vivamus facilisis libero eget enim volutpat, eu tincidunt urna -Source: ©Lab OC- OpenCity 2012

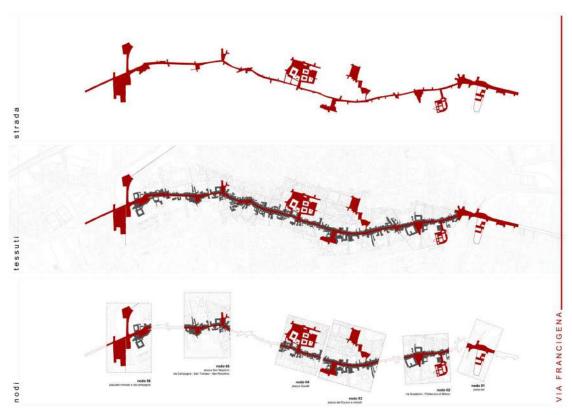


Fig.5 - Section of the A-21 (TO-BS) and urban stretch of the via Francigena - Source: ©Lab OC- OpenCity 2012

Athens Charter, is the reciprocal independence of buildings from communication routes: "the separation of pedestrian traffic from vehicle traffic" (Le Corbusier) in such a way that only certain means of transport circulate on each level and not others. In this way the buildings have no degree of dependence on the connective tissue of the streets, and urban morphology yields to the formal stereometric content of modern architecture, definitively breaking the relationship between figure and background that had distinguished the urban design of the historic city in relation to its territory.

It was in 1922 with Le Corbusier's project for the City for 3 million, revisited in the project for La Ville Radieuse in 1935, that the concept of the street in the traditional sense was definitively abandoned. In the modern architectural culture of the 20th century the word street, considered synonymous with disorder and confusion, is replaced by the definition of a road corridor of an exclusively functional nature, while the urban ground, the "ground floor" of the city, is used as a park without interruption. In 1925 Hilberseimer wrote that the city of the future had to have the character of a planned realisation, of an organism studied in all its parts. The city had to be planned and built on the basis of its own elements, the plan had to be clear and ordered. Buildings with closed courtyards were no longer to be constructed, but open, airy blocks, while the width of the streets was to be commensurate with the height of the buildings. The road is understood as a pure and simple element of communication at different scales and within different contexts, as well as its different degree of use: urban road, major road, freeway or motorway. The Turin-Brescia A21 motorway junction is a paradigmatic case study of an infrastructure completely detached from the territory and its river Po north of the city of Piacenza. A viaduct that is the expression of a logic that is merely functional to the achievement of the so-called fast and linear time in which "in modern times, speed, the shortest connection between two points, the elimination of any interference in the route between them became the main objective of territorial and urban communications, a strategy that translated into superimposing on the normal route of the city a superior system of faster roads, in some way independent from the places, as if these had to be flown over" (Purini 2005).

4. Open Reflections

The contemporary city in its different representations – global city, diffuse city, generic city, conurbated city – appears to be dispersed and scattered in the space of the territory according to a continuous process of liquefaction of its constituent elements. The condition of dispersion that has characterised the diffuse city has fuelled in recent decades a declared interest in infrastructures (Purini 2005), as an element capable of opposing the process of fragmentation and disintegration of the built environment. The diffuse city, in fact, needs to be connected in all its single points, determining, unconsciously, through its porosity a maximum degree of accessibility, in which the infrastructure of the road returns to be the connective element of the city, this time according to a new logic: that of the network.

This new condition has determined a shift in urban studies from a classic and traditional condition represented by the entire culture of urban type-morphological studies that distinguished the Italian school of architecture, to a condition of an iconic nature, thus developing new design horizons on open and indeterminate areas, marked by the presence of infrastructures that mark the territory almost always without determining a quality of architectural space. Franco Purini, recalling Bruno Zevi, affirms that since the infrastructure lacks an internal space could not be defined as architecture, even if it produces spatiality, and again defines the nature of an infrastructure that is both unitary and serial. The longitudinal continuity of the large-scale design is counterbalanced by the transversal modularity of certain architectural elements standardised to the scale of detail. Purini also states that the perception of the building takes place in single parts that determine new frames each time, while a unitary reading on a territorial scale is impossible for the user. The aesthetics of perception prevails over the quality of the built space. While the recovery of a greater plastic dimension, by no longer using prefabricated elements, could determine a different aesthetic value of the work, within a tectonic context proper to architecture, in order to determine a greater degree of relationship with the territory on which the quality of the designed landscape depends.

These lack of awareness factors in the act of designing determine "a sort of phase of rejection which sees urban organisms rejecting infrastructures in many cases. This reaction has several causes. The first is

that infrastructures that penetrate the built fabric are considered to be the main factors in their degradation. Hence the growing conviction that there is a genetic incompatibility between ramps, viaducts and junctions and the cityscape. In fact, this incompatibility is not only environmental and functional, but also aesthetic (...) in the sense that they introduce violent differences in image and irreducible scalar contrasts into the urban scene" (Purini 2005).

5. Conclusions

What role can road infrastructure still play in the design of new territorial arrangements? In what way can the street be the place of representation of contemporaneity? Can the street become a urban place again, not only in its architectural exception, but also in its social exception as a space of relationship among the inhabitants?

This is the reason why infrastructures have the task of assuming the new architectural unity, capable of structuring new forms of contemporary landscape. Thus the road, from pure engineering infrastructure in its widest use of meaning, can and must be an architectural theme, as well as an architectural tool capable of interpreting the new contemporary city: "In other words, this means attempting to approach the design of a road like the design of a building, from an architectural as well as a functional angle, trying to define its identity and solve the technical problem due to the coexistence of different if not conflicting functions; taking into account the relationship with the places it crosses and in particular with the continuity of the pre-existing fabric" [Pagano 1989].

New design actions see the infrastructure as a tool for achieving a possible improvement in the quality of life of the inhabitants, and this will be possible only if the issue is not reduced to a purely functional matter, but also and above all to an architectural one. We must succeed in interpreting the new social values of the city, for the construction of a code capable of writing a document of the new human relations in space and time and transcribe them in a new system of spatial forms capable of being the expression of a new world, where architecture and infrastructure become a single thing: the architecture of infrastructure, as it was for the cultures of antiquity when architecture was defined as the great nurse of society [] and this through two different

levels, as defined by Nicola Emery [], one as a therapy of space and the other one as a social device.

Finally, it is necessary to attribute a morphological value to the technical intervention of the road, so that it acquires a new ordering role, in order to be able to return it as a component of the settlement. Vittorio Gregotti concludes his editorial entitled "Strada: tracciato e manufatto" (Road: layout and artefact) in Casabella issue 553–554 as follows: "To do this, it is first of all necessary, while respecting specific competences, to begin by returning the road to the realm of architecture, and obliging our discipline to consider the problems it arises as its own and specific ones.

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Street Overlaps: Decoding Lisbon Thresholds

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Abstract

The mediation between urban layout and built fabric is made by threshold spaces, as devices that extend public life into private spheres and contrarywise. By interpreting and decoding the morphology of these spaces is possible to reveal their spatial qualities and how they build transitions between distinct urban elements. This paper addresses the morphological diversity of a specific situation of thresholds, generated by the overlap of streets in the city of Lisbon, in order to reveal their potential as interstitial space entities. Street overlaps are relevant spatial configurations, being significant points of gathering and collective activities. Therefore, these situations unveil spaces on the edge of distinct urban systems, that represent a challenge about the urbanization of private spaces. Two exemplary case studies were selected: Music Box club and Posto de Limpeza da Junta de Frequesia de Arroios. Through this spatial and morphological interpretation is possible to understand configurations, uses and relations established between their private nature and the streets that overlap them. The systemic decomposition of those streets and the private spaces they generate contributed to a new interpretation approach of street overlaps and to understand their usefulness, in both architectural and contemporary urban design, as activators of urban life.

Keywords

Street overlaps; Threshold spaces; Systemic decomposition; Lisbon.

Introduction

The street, as an urban element, is historically connected with the throb of life in the city. In the one hand as a device of connection and

support for the built fabric¹ and, in the other hand, as place of gathering, sharing and interaction of a collective². As element that belongs to the public component of the urban fabric, it is in the street that a significant part of urbanity is revealed. Its shape and the way it sizes spatial systems, within its confining built environment, constitutes one of the most determinant aspects in the sedimentation process of a rich and dynamic urban life.

The public space has consolidated itself predominantly since the 19th century providing support for urbanity to take place within cities. However, the contemporary city contains diverse examples where this principle dilutes, revealing spaces that are less established, where conflict occurs, signalling new urban challenges. Among these spatial deviations thresholds appear - mediating conflicts - acting as devices of articulation of different systems, either architectonic or urban. The binding role these "in-between" spaces play in our urban environment triggers activities and opportunities that stimulate urbanity. The mentioned threshold is, therefore, understood as part of a thick limit, being a space or spatial device, instead of a soft intangible line that separates distinct entities. Herman Hertzberger pointed the quality of these thresholds, as generators of dialogue amid street and domestic spaces³, referring to their form not only as an adaptation to urban circumstances but as a potential trigger to create vibrant spaces. The overlap of streets generates interstitial private spaces that host activities and social interactions with a broader collective sense. These spaces assert themselves as extensions of public space and urban life, becoming thresholds, where their spatial and functional ambiguities dissolve a rigid understanding of this limit between public and private.

Having the city of Lisbon as framework of the research, the following article aims to reflect on the existing spatial potential in threshold spaces generated by the overlap of streets. This "in-between" condition, in its broader sense, given by the relation amid geometry and topography of public space, allows the configuration of places that host diverse activities. Throughout a process of systemic decomposition⁴ of two case studies, *Music Box* and *Posto de Limpeza da Junta de Freguesia de Arroios* (PLJFA), the research targets to decode the spatial composition of the interdependent relation among streets and some particular private spaces, understanding the threshold that mediates this relation.

Extending urban space through the use of interstices

In the process of evolution of urban fabrics overlap arise as a transformative action of urban form, restructuring and introducing a new order or spatial sense⁵. However, the contemporary urban fabric incorporates urban situations where the street, or part of the fabric, result of the adequation of urban form to a physical context and the topography where it is inserted. In these specific situations, the confrontation between urban elements – streets, squares, buildings – is made by a less fierce and transformative form, seeking solutions of adaptation and morphological adjustment. Therefore, it is on such scenarios that occasionally urban episodes of greater formal richness occurr, where the typological principles are crystalized, questioned and reinvented.

The topographic variations on the territory generate the crossing of streets on the urban fabric, on an uneven way, that apparently preserve a certain morphological independency, but that in reality share a common space that binds them, which is the threshold between both elements. This space, limited by uneven overlaps of two or more streets, configurates places of particular interest, mainly due to the role that it can assume on the spatial articulation of streets situated on different height levels. In a certain way this spatial value – of the threshold – has been already identified by Peter and Alison Smithson, in 1974, on "The Space Between", published on the magazine *Oppositions*, where the in-between space is understood as an opportunity to represent new ways of spatial relation among building and city.

After the second half of the 20th century, the introduction of diverse mobility infrastructures – freeways and railway tracks – originated the development of a collection of interstitial spaces under viaducts that, in recent times, the beginning of the new millennium, have been target of diverse interventions and experiences. Those interventions qualify the public space and the so-called threshold spaces, with the objective of dotting these places of activity or function of urban character⁶. Examples as the *Promenade Plantée* (1993), in Paris, or more recently the *Viadukt* (2010), in Zurich, represent architectonic solutions where the space resulting of the overlap of the infrastructure with the street is transformed in a system of spaces inhabited by people. The inferior vacant space acquires a built thickness where several uses, services, commercial areas, restaurants, among others, open to the

city. In complement, Asian urban contexts like Tokyo or Hong Kong, illustrate situations where this sort of threshold space is generally colonized through less erudite architectonic solutions, which are equally efficient on their way of activating urban space, becoming new fronts of the built fabric.

Towards such urban fact, one should evidence the particular relevance that the exact empty space – the void – between the overlap of streets has, building an articulation between public space and the surrounding built thickness. Sometimes this occupation over the street doesn't possess a direct connection to public space, using the void, that corresponds to the intersection in-between streets, as place of transition and access. The variation of threshold spaces goes from simple architectonic element such as door sills to galleries and arches, being present in several urban situations of confrontation. This urban place establishes the basis for the emergence of a threshold space that acquires built form, allowing the articulation among interior and exterior. This particularity finds parallel on the conceptual principles of limit, systematized by Aldo Van Eyck, where the idea of limit doesn't resume the simple border that is possible to cross but, a space that holds thickness and volume7, consenting human appropriation, building simultaneously spatial transitions that prepare us to the rite of passing from one place to another, experiencing an intermediation moment8.

The idea of a thick and habitable threshold, assumes itself frequently, as a device of spatial composition that contributes for the integration concerning urban elements of different scales⁹ and, simultaneously, dissipating rigid forms of limits that block a greater fluidity among several kinds of existing urban spaces.

The space in-between overlapped streets: the case of Lisbon

The city of Lisbon contains several examples of overlaps due to its topography and the persistence of its urban fabric. The phenomenon of overlap occurs due to this characteristic of the city that even after suffering transformations, during long periods of time, attempts to keep its pre-existences¹⁰. These occurrences can be more or less impactful, displaying distinct kinds of overlapping situations (Fig.02), some generating spaces to inhabit, others just fulfilling the endeavour of estab-





Fig.1 – Diverse types of appropriations under streets with different scales – Source: Author 2022









Fig.2 – Diversity of overlapping situations on Lisbon - Source: Author 2022

lishing a way to make two or more streets coexist. In the particular case of Lisbon, these situations are mostly noted when the rigid grid meets the topography, revealing an incapacity of its adaptation to the site. From this encounter emerge crossings and bridges that articulate the transition, and within their structure new spaces, more or less vacant, that may contribute to the atmosphere of the urban environment. Nevertheless, this topographic situation – grid versus topography – isn't necessarily a condition for the creation of these spaces, being one of many other situations where those mediating situations happen. The following case studies aim to unveil hidden spaces within the urban fabric, decoding the interdependent relation they have with the overlapping streets that compose their urban surrounding.

A threshold space can be understood as a private spatial configuration of mediation, a space that can be integrated, overlapped, confronted, associated, inserted, expanded or suspended, when one analyses its relation towards public space¹¹. However, these specific spaces, situated underneath the public realm define a different type of threshold, a volumetric gap that is left by the overlap. Therefore, thresholds generated by overlaps are intermediary spatial entities present on the cross of different elements of the urban fabric.

In order to explore this relation, space > threshold > space, Till Boettger makes use of an analysis based on spatial reading and interpretation using mostly plans and axonometric drawings that explore the volumetry of thresholds and their positioning in buildings. The methodology suggested by the author seeks to understand the threshold in its spatial definition, sequence, geometry, topography, materiality and existing furniture¹². Yet, in the following case studies the focus is on the systemic decomposition of the threshold, pursuing the relation of the existing volumes with the urban context where they are inserted. Both case studies were selected to illustrate the potentiality that such spaces can have, attempting to open a discussion about the occupation of less conventional vacant spaces, not as new strategies to make space but, with regard to an attitude that can promote less disruptive architectonic solutions within the urban environment. The selected case studies differ in function, location and type of overlap, intending to demonstrate a wider diversity present in the city. Although both case studies depart from the problematic of topography, as main condition



Fig.3 – Case studies location. *Music Box* (south) and PLJFA (north) – Source: Author 2022

that creates threshold spaces, their selection was based on distinct aspects. The first case study will explore the effect of overlapping streets on a fabric that represents an area rich in nightlife events whilst the second case illustrates a space that hosts a determinate function in a residential area. Both cases show distinct relations with the public space, more direct or indirectly, depending on the "thickness of the threshold" and the way it establishes openings from the private space to the exterior.

Case study #1 | Music Box

The first case study is *Music Box*, a club located under Alecrim Street, with openings to Nova do Carvalho Street and São Paulo Street, communicating its interior space with both. This space results from the renovation of Alecrim Street, which was rebuilt after Lisbon's 1775 earthquake. On the right-hand side of Figure 04 we can see the main access to Music Box through Nova do Carvalho Street, by opposition on the left-hand side of the figure we see Alecrim Street over São Paulo, a considerable wider street.

The interpretation of the relation amid the space that *Music Box* occupies and its contiguous streets reveals a mediation of two distinct urban environments. Through Nova do Carvalho Street, the club opens its main doors, a more intimist and strictly pedestrian street, where other clubs and bars are located. By opposition, the other side of the club opens through a large door – the backstage – to a wider street, São Paulo, where the scale changes, marking the presence of public and private transportation and different uses such as restaurants and cafés. In figure 05 this relation can be seen when comparing the width of both streets on the plan scheme.

Alecrim street creates two more spaces in addition to *Music Box*, being these: a wine bar on Nova do Carvalho Street (south) and a storage/deposit in São Paulo Street (North). In order to explain this overlapping situation, the use of an axonometric drawing (Fig.06) became crucial, as instrument of spatial interpretation. The articulation amongst plan and axonometry reveals the penetrating space that gets loose from the built fabric and appears under the street. This concludes that the overlap generated three spaces when the urban fabric (Alecrim street) and the built fabric merged, being the three of them accessible from the streets that are overlapped.







Fig.4 – Overlap of Alecrim Street over Nova do Carvalho and São Paulo streets - Source: Author 2022

Therefore, the following image, figure 06, illustrates this relation in-between the public space of both streets and the spaces that sit underneath Alecrim Street, demonstrating the extension of the public space towards them. The spatial experience of transiting under Alecrim Street is followed by a second moment, a pause, to acknowledge the existing space, represented by the arch, and it is complemented by accessing the interior of the spaces that are private. These sub-spaces, one in Nova do Carvalho Street, and the other in São Paulo Street, are ambiguous thresholds that allow the user to be in the street whilst having a feeling of protection. Through this systemic decomposition one can understand different components such as the street, the threshold and the hidden interior spaces, presented in this overlapping situation.

The axonometric drawing in figure o6 displays the hidden volumes of the spaces under Alecrim Street and the recognition of the systems that coexist in the overlap. In black is possible to understand the existing spatial insertion, while in red the volumetric explosion of the volumes allows the understanding of the scale, shape and singularity of these spaces located under the street. The shapes represented in red refer to the path of mediation that the threshold space promotes, from street until interior and passing through the arch.

Case Study #2 | Posto de limpeza da Junta de Freguesia de Arroios (PLJFA)

The second case study is located on the intersection of Aquiles Monteverde Street with Arroios Street, being the last one overlapped by Pascoal de Melo Street. Aquiles Monteverde and Pascoal de Melo streets communicate through a stair case that is parallel to both, hosting the entrance of PLJFA — an urban cleaning post — that extends underneath Pascoal de Melo Street. The hidden space is overlapped by a succession of infrastructures, first the stair case and after the street itself, having a different spatial nature than the previous case study.

Analysing the spatial volume of PLJFA one can deduce that the project of Pascoal de Melo Street generated this space of opportunity where a new activity could emerge. In figure 09 is possible to see that its volumetric shape is the exact occupation of the vacant space left by the structure that supports the overlapping street. The arched ceiling derives from the type of structure used by the time the street was built,

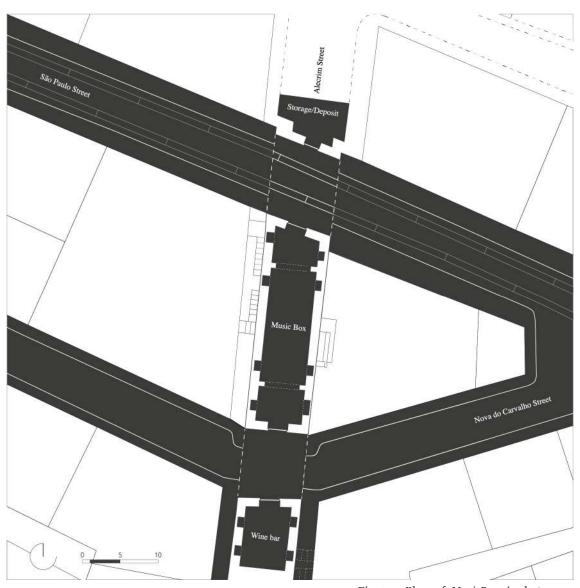


Fig.5 – Plan of *MusicBox*, in-between Nova do Carvalho (south) and São Paulo (north) streets, underneath Alecrim street - Source: Author 2022

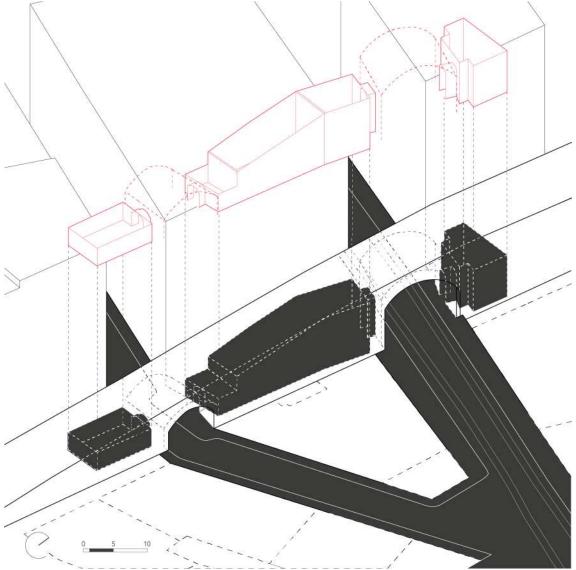


Fig.6 – Axonometric diagrams of the spaces existing under Alecrim street – Source: Author 2022)





Fig.7 – Overlap of Pascoal de Melo street over Arroios street and parallel to Aquiles Monteverde street – Source: Author 2022

being the entrance on the lateral side, due to its planar characteristics. Consecutively, this case study differs from the previous one because it wasn't meant to have dual connection with different streets but, to serve a use that was limited with one single entrance.

In terms of spatial display, the post presents two levels, being the upper most recent, making use of its height and creating more compartments. Nevertheless, its notorious that this space was intended to act as a deposit, storage, or broad space with multiple possibilities of use. The use of the space, a cleaning post, indicates that it was thought to become a spatial structure that gives support to public space. In comparison with the previous case study this space evokes a distinct relation with the street where it opens to, being the threshold represented by a less distinguished door sill.

This space has a direct relation with the street but, due to its use and surrounding uses, the vibrancy and attractiveness of the place is weaker. The space in-between is less preeminent, once it is a small architectonic element and so is its access, giving a stronger connection to the relation among the space and the street through this porosity. When compared, both cases share a high potential to host uses and activities, however, the environment and urban friction generated by both find distinct echoes in the city. If in the first case, the use of the threshold space is verified as a clear device of spatial articulation, in the second example, we realize that the character of the use of private space assumes a greater relevance in the ability to attract activities (or not) to the interior space generating collective urban experiences and therefore extending the public space to other limits.

Final Remarks

"Physical urban quality is in the measure, the proper understanding of the limits of a space. As soon as we define it, we segregate it. Good public space has no limits, or the ones it has are undefined, multiple, oscillating"¹³.

Through the case studies the research infers the importance and potential of these spaces that are generated on the intersection of urban infrastructures. Their diversity of uses and the way these devices act as solutions that minimize disruptions on the urban layout, promote opportunities and open the possibility to re-think a more tactical and

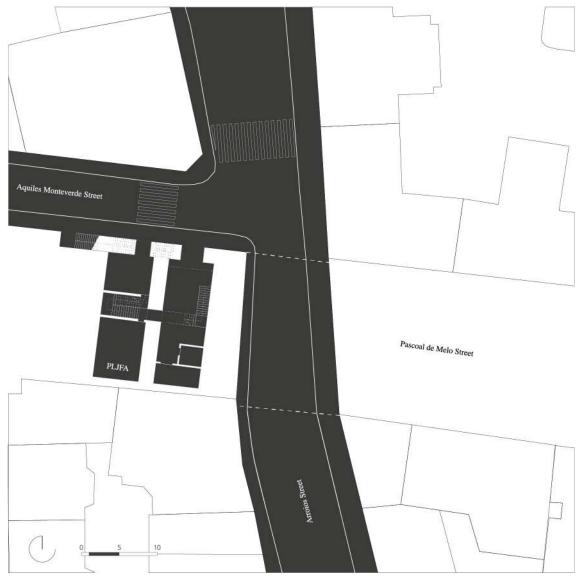


Fig.8 – Plan of PLJFA, located on the intersection of Aquiles Monteverde and Arroios streets, underneath Pascoal de Melo street – Source: Author 2022

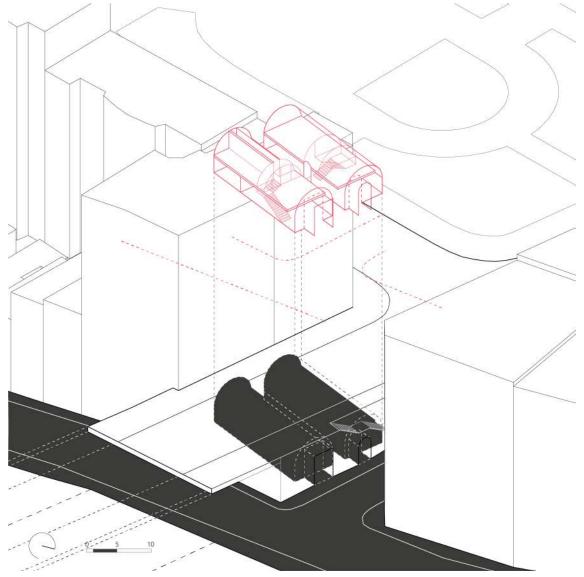


Fig.9 – Axonometric diagrams of the spaces existing under Pascoal de Melo street – Source: Author 2022)

punctuated approach towards the project of the city. The decoding of those spaces enhances a broader understanding of the city, unveiling specific situations that aren't evident, yet they are important. Their true potential resides on their ambiguous condition, being both space and infrastructural support, sustaining a relation among distinct urban elements.

From the first case study, *MusicBox*, we understand a gradation that departs from the public space towards the interior, passing through the threshold. The constitution of this threshold is important to provide a porous characteristic to the private space, allowing the spaces that sit underneath the street to open towards distinguished points of gathering, represented by the arches. The roof that these arches represent invites and hosts activities, dynamizing the immediate surrounding private spaces and reflects a necessary ambiguity to mediate the public-private relation. In the other hand, the second case study, reveals a direct relation with the street and a thinner threshold.

In this way, the formal links between public space and built space are not constituted in such an intense way. So, there is a weak spatial transition device. However, some potential value can be recognized in the case of PLJFA, especially if we understand how to use the space created by the overlapping of the two streets. Through these case studies, it can be understood that when the spatial volume generated is significant, then this area acquires the capacity to be understood as a buildable space with several floors. The interstitial void (between two overlapping streets) becomes a place that can be built, which opens the way to different forms of appropriation where the ground floors open to public space and the upper floors welcome spaces with a more private nature.

Spaces like the ones previously studied reinforce the importance of the physical characteristics that are part of the built matter, making them more attractive, more urban and livelier, highlighting the relevance of an urban materiality that is needed in cities¹⁴. The qualities noted in the interpretation of these spaces can serve a wider understanding and initiate a dialogue where new urban elements can be integrated. Thus, this specific type of thresholds, advocates a material quality that allow activities to occur, despite the uses that promote them, making of these spaces the bearers of endless opportunities.

Acknowledgements

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Urban and architectural ennoblement of the city: Designing Rua do Loureiro, Porto

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Abstract

The heritage valuation of urban processes –their parcelary and allotment structure, typological, formal and constructive aspects– in the metamorphosis of cities is the underlying problem under discussion in this paper.

The opening of *Rua das Flores* in 1521 by D. Manuel I, connecting *Largo do Convento de S. Domingos* with *Porta de Carros*, followed his foundation of the *Mosteiro de S. Bento da Avé Maria* in 1518, both works in order to *ennoble* the city. Taking the same idea, the Benedicte nuns organised the space in front of their church, *ennobling* it by designing *Rua do Loureiro*. Replacing the old and by them occupied *Rua de Carros* –also leading to relocate *Porta de Carros*—, the nuns profited from one of their land parcels, allotting *grounds* –considering principles of measurement and modulation— and establishing volumetric and constructive rules to private buildings in their new southern front of the *Terreiro*.

By identifying and drawing overlapped transformation layers in time, we developed a backwards process that, at some point, allows us a plausible onwards reconstitution of the urban and architectural design process, namely three main moments of urban transformation of *Rua do Loureiro* over five centuries: mid-16th, second half of 18th and early 20th centuries. Impressively, the matrix initially established prevails on the southern front of the street, despite the profound transformations inherent to the replacement of the monastery by the central railway station. [1488]

Keywords

Porto; *Mosteiro de S. Bento da Avé Maria*; *Rua do Loureiro*; city transformation; ordinary architecture

First remarks

When we stroll along the historic centre of Porto and come across *Estação de S. Bento*, we rarely ask ourselves what that area had been before the station was built, as it is today one of the most representative monuments of Porto architecture, symbol of modernity and centrality at the new upper downtown of the city since the early 20th century.

The exercise of studying this street prior to that symbol, even though it might be interpreted as unexpected for not considering it as the most obvious reference element, proved to be a necessary exercise to understand the transformations of the city, its multiple rhythms and its regulating principles; furthermore, to identifying its main agents, and also for valuing anonymous architecture, alongside to other architectural and urban elements that were once considered as references.

Notes on method

To carry out this study it was important to firstly recognise on-site the current urban morphology, through a metric, drawn and photographic survey, in order to identify the characteristics that make up the architectural and urban elements that persisted throughout the different historical periods —paying special attention to discontinuities and fragments as possible signs of permanency and overlay.

In parallel, we gathered primary archival sources, both textual and iconographic, including cartography, cross-referencing them with reference literature, monographic as well as thematic, considering the time interval of our study –ranging between 16th and 20th centuries. By orderly mapping this information, both in time as in space, the re-draw of all these materials took design as the main tool and process for the analysis, interpretation, and synthesis. The available and successively increased vector drawings were important for this exercise, as they allowed us to mediate rigour, namely considering the heterogeneity of representation systems of primary sources.

As no iconographic documentary sources prior to 1790 are known to exist, the schemes presented should not be understood as scientific certainties, but rather as plausible reconstitutions of the architectural and urban design process achieved through this method.

Notes on prior and newer circumstances

Throughout time, in different periods, the contribution of religious

entities, namely from monastic and conventual orders, to the urbanisation of urban centres was and has been fundamental, acting as agglutinating poles or as agents of renewal.¹

In Porto, from the 13th century onwards, the establishment of religious orders played a fundamental role in the city's development, confronting powers in an episcopal city, led by a trade-based civic council, and with the royal power struggling to gain some presence. The first mendicant orders *–Convento de S. Francisco*, 1234, and *Convento de S. Domingos*, 1238– chose a position outside the primitive Walls, west of the Cathedral hill and the valley of the main stream in the outskirts, the *Rio de Vila*, promoting territorial dynamics and urban growth. With the construction of the second Walls, two new mendicant orders *–Convento de Santa Clara*, 1416, and *Convento de S. Elói*, 1490, respectively in the outer and the inner side of the Walls, both near city doorways—were positioned in a straight relationship with the new limits of the city, while the former convents played an important role in the city urbanisation.

Thereby, the implantation of these convents accompanied the liminal condition of the two Walls –from newness to obsolescence– and promoted urban transformations throughout the 13th and the 15th centuries. This condition of a changing urbanity over two centuries took advantage both of strategic topographical conditions, in a territorial landscape, as well as considered the conventual complexes' own needs, dealing with the urban constraints of a city in consolidation.

In the context of the early 16th century, with D. Manuel I promoting town planning reforms –both in Lisbon and Porto as well as in several other cities and towns—, the foundation with royal support of a fifth religious order in 1518, the *Mosteiro de S. Bento da Avé Maria*, seems to have played a key role in urban development on a city scale. As soon as 1521, the king ordered the opening of the *Rua das Flores* as well as the reform of the *Porta da Rua de Carros*, setting the new main axis connecting the then city centre, near the fluvial seaport at *Rio Douro*, with the main northern upper gateway. The location of the monastery played a pivotal and referential role, in a real urbanistic operation that the documents of the time refer to as *for the ennoblement of the city*—a late 15th century political, modern and edificant idea. Dealing with existing urban constraints as well as to solve specific needs of a female monas—

tic complex, the Benedictine nuns bought and received some of the bishop's vegetable gardens, but at the same time overlapped their monastery to former spaces of *Rua de Carros* near the Walls, interrupting one of the most important eastern communication routes and ways out of the city, thus creating an urban problem that they would resolve in the following years by designing the *Rua do Loureiro*. In this sense, this monastery played a crucial role in urban connectivity and design, managing two important streets and the northern gateway of the Walls.

Three urbanistic tools in the 16th century settlement of the monastery and the street: plotting property boundaries, a rhythmic morphology and noble building rules

The solution to the urban problem in question was naturally suggested by the religious entity of the monastery, expressed by its willingness to use a plot of land for construction: a courela.² As the creation of a new symbol for the city was not restricted only to the construction of the building, its authority was also measured by the "influence" of its urban context. Thus, the construction of a new housing front on land that was difficult to cultivate, with materials considered nobles such as 'stone and lime'-,3 would ennoble the monastic building itself as well as the place and the city, in a propaganda action that would bring prestige to that institution, in line with the action of D. Manuel I.4 Cleverly, this solution simultaneously involved the design of a new street that would simultaneously solve the entrance to their church. This monastery, being female, had its choirs in the longitudinal axis of the church and, therefore, its main entrance could only be done laterally, open to south,5 with the Portaria -or gatehouse- recognising the leading role of the south-western corner.

Therefore, clarifying the physical limits of the land that would belong to the city and to the monastery was the first step towards designing Rua do Loureiro —at the time Rua Nova da Rua de Carros. This first action, officialised in 1547,6 was also our first exercise7 —a drawn reconstruction achieved by interpreting written documents reporting the demarcation of boundaries and the use of the courela, the width of a future street, and the obligation of the then "Rossio de Sob a Cividade" to remain public. Bearing in mind that



Fig.1 – Mosteiro de S. Bento da Avé Maria in the 16th century – Source: Author 2019

the construction of the monastery began in 1518 and that the first known representation is from two centuries later, we ought to clarify that to develop this study we considered plausible that the church had remained in the same position over the centuries. (figure 01)

This exercise was the first sign that we were facing an urban gesture worthy of further study, especially because the agents, without the use of drawing, ensured the possible accuracy of property boundaries through a demarcation process using urban elements for spatial reference (such as cornerstones, corners and landmarks, figure 02) and using a unit of measurement of its time and context –the *vara*, literally a *rod*, an ancient Portuguese measurement unit, corresponding to 1.10 m, being a quintuple of the *palmo*, with 22 cm.

Knowing that the process of systematising urban typologies in written language is a lengthy and constantly evolving process, the 16th century documents demonstrated an advanced capacity for understanding urban space and its volumetric relationships, as well as knowledge of urban design methods, setting out what today we easily recognise as possible premises for discussion at an urban-planning stage.

After securing a provisional urban connection by the *Travessa do Loureiro* in the southern boundary of the *courela*, a new street has been defined –with six *varas*, wider for the *ennoblement* of both the monastery and the city– (figure 03), which would allow an urban design of the church' public entrance courtyard, as well as to the new façade facing it, and the management of the city flows especially those getting to the monastery. By *offering* a new, wider and *noble* street to the city, the *Mosteiro de S. Bento da Avé Maria* played a nodal role at the crossroads of the upper city's main streets, whether they were new or reformed.

The courela's plotting act of 1565:

an operative module of six 'varas' and a normative and 'ennobling' tool

Besides the intention of using the *courela* for economic purposes, the documental sources effectively shows that the religious entity saw here an opportunity to *ennoble* the public space facing its building. Attracting neighbours and establishing a new area of qualified services (as in *Rua das Flores*), already started at the western end of the future street and even including dependencies of the monastery, would also be arguments for the implementation of this intervention. According to our interpretation of primary documents,⁸ the nuns divided the land plot in

eleven lots, chãos or grounds, distributed in three groups (of six, three and two lots, from west to east) taking into account the slope of the plot and its irregular shape (both rising and narrowing, also from west to east), in order to achieve two major purposes: the privacy preservation inside the monastic enclosure and the profitability of each lot in function of its area and buildability. In this urbanistic operation, the nuns established the width of the lots, the number of floors thus the height of the façade facing the monastery, and the height of the rear façade (which could be different from the front one). This allowed them a balanced division of area and floors per lot, and consequently the attribution of a corresponding rent value. More significantly, the street frontage was conceived as an organism in its entirety, with major alignments considering parts of the whole and not simply lot by lot. The urban regulation of the nuns also established principles for constructive detailing, with durable and thus *noble* materials, indeed the main sense of ennoblement of the city -in addition to the width of the street as the width of the lot, the building of its façades and its controlled heights and rhythms.

The diagrams presented in figures 04–05 were an exploratory tool to allow us to cross–reference the data from the metric survey (2017) with the interpretation of the aforementioned document. As an exercise of overlapping time and information, our challenge was to understand which would be the eleven lots and how they would be organised based on the mentioned conditions –note the pre–existence of four western lots.

Although liable to be questioned, the diagrams in figure 06 demonstrates how we interpreted the division of the *courela*, taking into account the module of six *varas* (identified with the letter A). The first group of lots has six modules wide by four modules deep $-6A \times 4A$, the geometric figure of a square and a half—, each lot with a $1A \times 4A$ dimension. The second group of lots has three by three modules width and depth $-3A \times 3A$, a square— each lot with $1A \times 3A$; both the square basis and each lot are proportionately 3/4 smaller than in the previous group. The third group presents a front corresponding to approximately three modules -3A, but with just two lots, the last shifting direction and gaining three façades in its street corner condition. This exception absorbs most of the urban design tensions by its position at the inter-

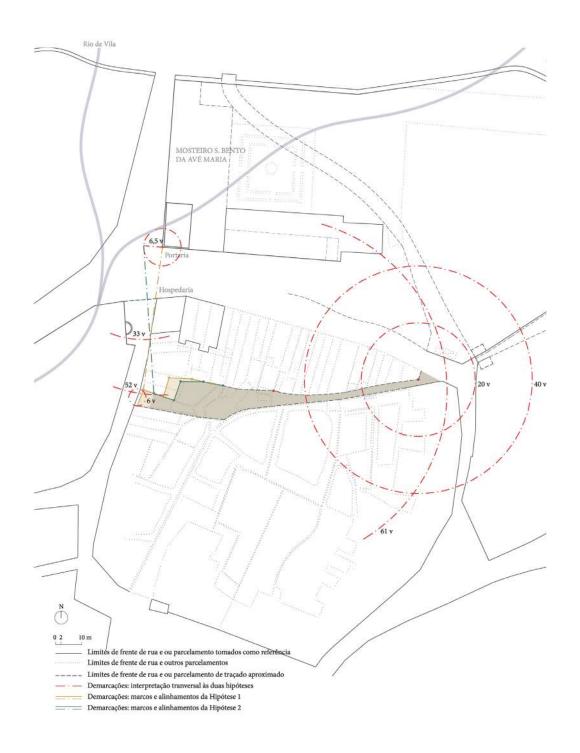


Fig.2 – The boundaries of the city and the monastery – Source: Author 2019



Fig.3 – The process of public space's demarcation – Source: Author 2019

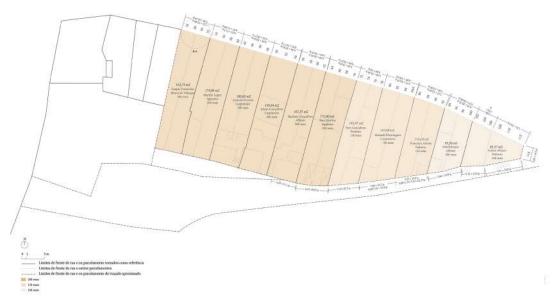


Fig.4 – The *courela* – Source: Author 2019



Fig.5 – The *courela* and the 6 *varas* as a module I – Source: Author 2019

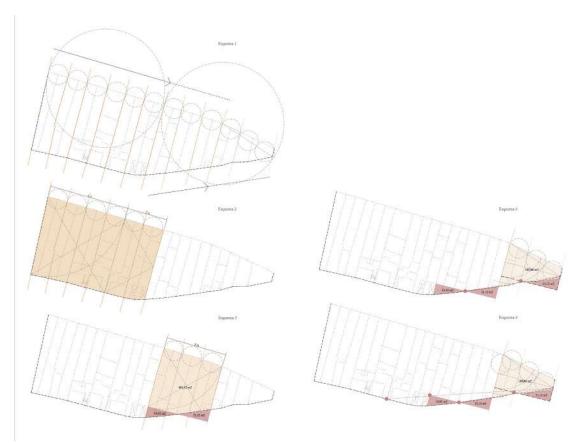


Fig.6 – The *courela* and the 6 *varas as* a module II – Source: Author 2019

section between this new street —*Rua Nova da Porta de Carros*, soon to be *Rua de S. Bento*—, the provisional *Travessa do Loureiro*, and part of the old and southern remaining layout of former *Rua da Porta de Carros*—latter on, this L—shap will be renamed as *Rua do Loureiro* in 1714.9 This shows, once again, the importance of public space *ennoblement* for the urbanising agents of the 16th century, prevailing over private space. Worthy of emphasis is also the fact that the module of six *varas* that rhythms the front of the street, and its inner private space, is exactly the measure of its *noble* public width, thus relating private and public elements of the urban fabric.

Concerning to the lots' height, the clauses of the emprazamento, i.e. the leasing document, also established them with precision: a two-storey volume in the second and third groups of lots -a ground floor and one sobrado, i.e. one wooden floor- in the eastern and highest part of the street; and a three-storey volume in the first group. Considering the two-storey seven lots at east with about six varas height, we might think of a cubic proportion for each void module of the street, in a three-dimensional matrix, defined in plan and section, relating width, height and depth. Recalling the nuns' purpose of privacy, the height of these two eastern groups of lots ensures it, even starting at the highest point of the street and with it well above of the church' public entrance courtyard. The steepness of the street, downing towards west, and the maintenance of this maximum alignment of six varas of the eastern lot (the pink line), allows an increased height to three-storey reinforcing the qualification of the first group of six lots, closer to a neuralgic urban position. (figures 07-08) This balanced management of urban constraints converges in picturesque perspectives between horizontal and diagonal dynamics, and will be emphasised throughout the following three centuries, as well as its function in the city at one of its main gateways, supporting complex flows, offering a high-quality public space and services, and hosting religion processions and trade fairs. (figure 09)

Urban and architectural transformations in the 18th century: from ennoblement to Enlightenment

As mentioned for the 13th and 15th centuries, during the long 16th century religious orders kept a key role in urban development and trans-

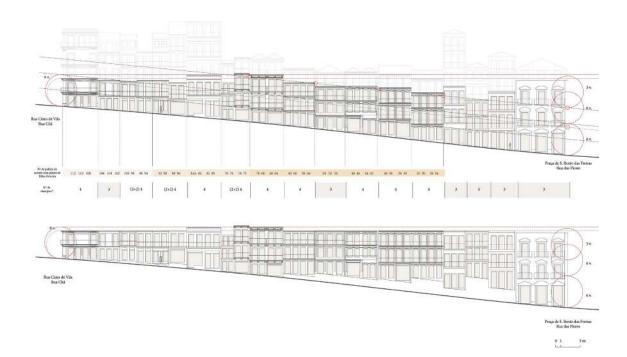
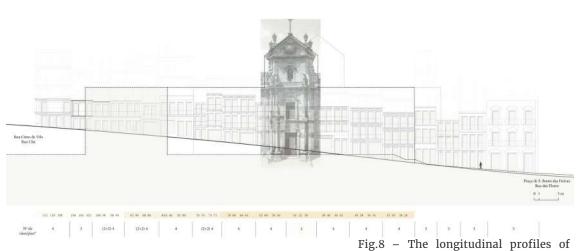


Fig.7 – The profile design of *Rua do Loureiro* in the 18th century – Source: Author 2019



the *Rua do Loureiro* in the 18th century – Source: Author 2019



Fig.9 – From Rua do Loureiro and Terreiro de S. Bento to Clérigos – Source: George Vivian, 1839

formation,¹⁰ as well as in further epochs, namely during the Pombaline urbanistic operations after the great earthquake of 1755, carried out in Porto by the *Junta das Obras Públicas*, *JOP*, in the period 1763-1834. In these two centuries, as in the following ones, the city growth will reinforce the growing centrality in front of *S. Bento*, expressed in the progressive densification and even in the increase of floors in *Rua do Loureiro*.

The fire that broke out in the monastery in 1783 led to the reconstruction of the main façades of the church and monastic facilities, namely those facing the street front under analysis, in a new architectural incision requalifying this public space through the overlapping and convergence of rhythms. The coincidence of this tragic episode with the ongoing urban and architectural transformations led by JOP in the vicinity of our case study makes it plausible that, beyond the architectural exceptionality of the new church façade,11 several influences occurred in the attitude of ordering and redesigning the city –even without specific supporting documentation.¹² Furthermore, both in the northern façade of the residential and commercial street, and in the monumental nature of the monastic complex, namely the south-facing façade of its church, it is expected that the phenomena of aggiornamento and densification have influenced the urban image of the public ensemble of the Rua do Loureiro and the church's public entrance courtyard, the Terreiro de S. Bento. (figure 09)

Thus, we superimposed both profiles of this dual urban space (figure o8) in order to pointing out the richness and complexity of their dialogue, regarding height control and alignments permanency, rhythms of lots and their openings. Note that the profiles overlap different times, being an approach to what might have been in the 18th century. The drawing for the analysis is based on a photographic and planimetric survey (2017), then incorporating redrawn old municipal building licences; archive photographs, drawings and engravings; as well as written documents from the 16th century as explained above. (figure 07) The second profile reinforces the levelled relation between the eastern building with six *varas* –the 16th century operative module A, with 6.6 m– and the western one with fifteen *varas*, i.e., two and a half modules A –this building, predating the nuns' act of 1565, was already their property and has always housed services external to the *cloister*, such as





Fig.10 – The southwest corner of the monastery: view from Rua das Flores, 1890's; and its western façade at Porta de Carros, still with its Portaria' courtyard, 1790; in both images, Rua do Loureiro is on the right – Sources: Emílio Biel, 1890's; Unknown author, 1790

the priests' residence. It aims to underline the idea of a conceptual composition of the southern street front, based on architectonic relationships and standard elements, then adapted to the circumstances – note the alignment of balconies and cornices, openings' number, proportion and mouldings, ..., namely in the first-central group of seven lots. In the northern front, prevails the stability of the monumental mass of the monastery, assumedly levelled and to which the topography has been adapted.

Another notable subtlety, even if it may be a simple coincidence, is the cross-axes between the 18th century church portal (whether or not maintaining its exact former position) with the single lot of three openings in the first group of the 16th century, rather than the pattern of two-four in the remaining ten. This reinforces the idea of empathy and dialogue between the symbolic monumentality of the church portal and the whole monastery and its relational public space, with the equally remarkable characteristics of the anonymous or common dwelling architecture. This case shows continuous transformation, and in fact we could not identify any concrete action of the *JOP* in our case study. We only know that in case they were responsible for some of the urban relations observed, they would have been able to recognize the urban design principles of the *Rua do Loureiro* established since its tracing.

Whether from the *ennoblement* of the 16th century or the *Enlightenment* of the 18th century, we may learn or remind the importance of alignments and rhythms, both in plan as in section, as powerful tools in urban and architectonic design, considering the relevance of its different scales. While they must be exact and essential, for future legibility, they must go beyond the level of abstraction, taking shape and form through dimensions, proportions, systematisation, type and variance, ..., and widths, lengths, heights and thicknesses, materials and construction detailing.

Final remarks

The Liberal Reformation and the dramatic extinction of religious orders in 1834 –whose impact lasted throughout the 19th and early 20th centuries all over the country– and postponed in the female houses

until the death of the last nun, led to a huge metamorphosis of this place.¹³ In fact, what gave importance to the Rua do Loureiro, as if in continuity with the Rua das Flores, was the position of the church' public entrance and its Terreiro; the main focus and the turning point of the Rua das Flores was always the corner in the diagonal of the monastery, with its gatehouse and bell tower. (figure 10) The demolition of the city gateways and Walls will reinforce the importance of the north-southwest axis, now connecting to the new and wider 19th century Rua de Mouzinho da Silveira, thus relegating the Rua das Flores to a secondary role. By shifting the main façade function of the building mass from south to west, with the replacement of the monastery by the central railway station, and accentuated by the opening of the Avenida da Ponte in the mid-20th century -both episodes worthy of a closer look-, the Rua do Loureiro also assumed a secondary urban role. Nevertheless, the street frontage retains a certain identity, arising from the unity and coherence of its modern and ennobling design.

Learning from 'past presents': designing <> researching

Beyond the specificity of the case study of Rua do Loureiro, deepening a crucial moment in the emergence of its condition of urbanity and matrix contribution to the city design, our aim is to highlight the sense of present time experienced in each of its main pasts, from the 16th century onwards. Based on the concrete data of the needs, agents, instruments and circumstances of the time, we developed a research method as an attempt to simulate the process of urban and architectural design itself, from its own disciplinary instruments and procedures. This study, using drawing both as a tool and as an operational instance of interaction of heterogeneous materials, may contribute to widen the scope of future comparisons. The capability to interrogate the *Past* with the tools of the urban and architectural design implies a willingness to better understand each one of those past presents and thus to rescue the relevant characteristics worthy of transmission and still operative for our Present. Beyond its material fragments, recognising the immateriality of principles and processes will be the most effective understanding of heritage.

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- 9 So from Rua Nova da Porta de Carros, to Rua de S. Bento, to Rua do Loureiro.
- In Lisbon, this contribution was substantially significant in the 15th and 16th centuries, for instance with the appearance of new consolidated areas as the *Vila Nova da Oliveira* and the *Bairro Alto*. Also after the destruction of 1755, some private operations initiated by religious houses were part of the city's renewal, as was the case of the community of *Nossa Senhora da Soledade* or *Trinas*.

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Reading local streets through an analysis of overlapping public-private interfaces

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Abstract

The street is a living organism where strangers feel "socially distant yet physically close", according to Bauman.¹ It is a shared space wherein private entities plug into the public realm at a defining edge. Private and public spaces form an in-between realm, due to overlapping interests and functions. The resulting interface is a micro-assemblage formed by subtle demarcations and revealing a deeper narrative of how people live in the city. The impact of the interface on public space depends on the degree of vulnerability and overlapping between realms. The edge of the street exhibits patterns of human flow, which projects onto the urbanity of the collective street. An interface may take different physical and social forms and a framework of interface typologies is created.

This paper investigates the micro-urban analysis of two streets in Malta, an island which is facing rapid urban development. The streets portray vernacular traces and must address the needs of a contemporary demographic. Everyday transformations of the interface are observed to draw out an understanding of the street. The socio-spatial results redefine the multiple possibilities of interface typologies. The paper discusses the dynamics extracted from such observations, revealing the way people perceive, appropriate and traverse streets. It concludes by indicating the utility of interface approach in planning and design policymaking.

1 Bauman, Zygmunt. Postmodern Ethics. Malden, Mass: Blackwell, 2009, p.153.

Keywords

Public-private dynamics, interface typology, overlapping realms, Malta.

City and street

Buildings and streets comprise the basic DNA of the city and urban space is often a direct reflection of its inhabitants and their interests. Streets are defined by programmes, the built fabric and the movement of users. The city is characterised by this 'assemblage' of forces which is felt at the intensity of the street scale.¹ Streets further reflect the key changes in a city, the evolution of which may be read through the metamorphosis of built form and open space. In this paper, we look at change through the interface created between the built façade and the 'street-room'.

The immediate human impression of the city is best captured at the ground floor interface where there is an intense mix of people, establishments, entangled and in coexistence (Fig.01). The edge of public space reflects the city's dual nature, where public and private are opposite counterparts. This paper considers the politics of public space, at the public-private edge. Through micro-assemblage thinking, everyday space is studied, in terms of the spontaneous, physical and infrastructural, individual variables in the 'unconscious' in-between space, formed by public and private systems. In line with the principles of New Urbanism, we consider the public-private interface as an important feature in the value of living in cities.

The paper is set in the context of the young island-state, Malta, wherein streets are undergoing major and rapid changes in response to increasing population and economic interests.

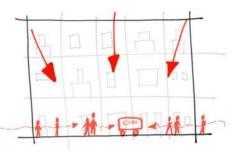
Interface structure and porosity

The street, in-between and the everyday

Bobić (2004) contends that streets are social spaces, or 'outdoor rooms'. Depending on height-to-width ratio, the street may feel intimate, when individual entities are close to the public realm and wherein the street edge is marked with items spilling out from homes informally (Fig.02). In contrast, if the street does not maintain a sense of enclosure, it may feel weakly defined and its public nature may relate poorly to its surroundings.²

The connection between building frontage and public space is referred to as public-private interface, which can define the urban landscape and, thus, street character. This in-between space is framed







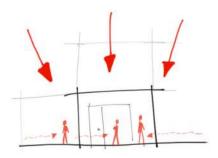


Fig.1 - Capturing the ground floor interface - a study of intensity in the city, featuring Galleria Vittorio Emanuele II in Milan - Photo credit: Alexandra Abela, 2019

by physical devices and demarcations. The interface comprises a series of dualities, separating domains while allowing connection. Daily interactions occur between people and space to form a dynamic interface³, described by Bobić as a composition of "objects, gestures, day-to-day words [...] in a real but fragmented way".⁴

There is a tension between the public and private realms, which depends on building height and mass, street width, the length of the street block, frontage widths and if volumes project outwards or set back from the building line. These public-private proportions relate to our perception of the street, reflecting in how fast we walk through the street, whether we linger therein, if we encounter people and so forth.⁵ Architectural interventions may mediate conflict; in contrast, private space may create an element of control towards the public edge. Ultimately, the interface relationship comes down to the degree of porosity, socio-spatial variables, and the socio-economic context of the place, all working in concert.

Interface porosity and overlapping _

This paper aspires to gain a deeper understanding of the overlapping private and public domains which may either allow for human attachment to urban space to develop or otherwise.

A building front onto a pavement has a direct and pedestrian interface. Permanent physical devices, such as setbacks or steps, may help transition from the intimate to the public realm. Trees, awnings, or overhanging elements like balconies, create an enclosure and overlap private onto public. Beyond such elements, interface thinking refers also to the architecture of temporal objects which are motivated by human adaptation.

Interface determination

There are three main aspects which pertain to interface determination – the physical structure between domains; the degree of visual connection or accessibility between domains; and human adaptation of the interface, which is ultimately the human interaction with objects and personal belongings across the threshold. These aspects create the interface porosity which defines spatial contractions and overlapping of claims.





Fig.2 - Appropriation and the need for public life and participation. (Left) A typical street lined with plants softening the private edge and mediating between the private residences and street. (Right) The *antiporta* is a device taking this further to create a rich layering and relationship between private and public - Photo credit: Alexandra Abela, 2021)

Interface thinking is based on the nuanced behaviour and physical devices across the threshold, which create degrees of division, overlapping or gradual transition. In the older Mediterranean building context, vernacular homes create numerous blank interfaces with high windows and gates and a feeling of private life being oriented inwards. Other archetypes, such as the Maltese historical domestic threshold defined by the *antiporta* (Fig.02), display a rich spectrum of public-private layering. The *antiporta* is a transition space where people entering a home may wait or stop to chat with the inhabitants; alternatively, inhabitants may spend time here while people-watching from the threshold.⁶

Psychological cues and behaviour

There is a sense of conflict in this in-between zone, since the interface is an avenue into how people share and manoeuvre through the street and across the threshold of an intimate and public space. In the words of Lefebvre et al. people transition from one domain to another on a "biological, physiological and economic level". Users move from public to private and vice-versa, via the interface – the neutral vacuum between the confronting realms.

Furthermore, if a street is furnished with architectural devices at a human scale, they are enabled to participate, as if the street were their room. People seek edges⁸ as neutral spaces in the public realm, to recollect, view the street or connect with people. The edge provides a sense of security on the street, as the interface becomes a safe buffer zone, enhancing privacy within the built form.⁹

Users become authors of their spaces, mentally adapting and relating to space through activity and use. The threshold has social potential, in terms of people lingering, meeting, consuming, chatting or passing by. Indeed, the social life of the street edge is possible with the emotional, psychological, social attachment to space. Psychological cues are born out of physical nuances which govern our public behaviour. The *antiporta*'s outer gate relates perceptually to public space and defines semi-private extents. If there is a degree of permeability that exposes the private quarters, the *antiporta* is read as part of the private realm, which strangers may feel less comfortable interacting with. The interface thus plays a role in psychologically separating the domains.

The interface realm, constantly changing in spatial definition, is









Fig.3 - (top, left) Infill redevelopment alongside 2-storey residential dwellings; (right) Awkward street interface created as a result of semi-basement policy interpretation; (bottom) A varying streetscape reality comprising two- and three-storey residences, 3+semi-basement, four-storey and higher residential developments as well as numerous garage and communal parking entrances - Photo credit: Lisa Attard 2022

thus a living form. In this way we may grasp the interface's potential power and its impact in street dynamics.

Introducing Malta

Zammit and Abela¹⁰ provide a historical overview of the public-private interface in the Maltese Islands, from the older inner cores with a morphology defined by a dense urban grain of inward-looking residences and high solidity of boundary walls and façades, to the newer outer edges of towns and villages characterised by varying realities. Within the former contexts one encounters the *antiporta*, with inhabitants further spilling out onto the immediate pavement space. In turn, the newer, largely vehicular-oriented, streets¹¹ experience a limited residential street culture, mostly within two-storey streets and especially those having a positive interface strengthened by well-land-scaped front gardens.

The year 2006 was an important turning point in local policymaking, with the widespread allowance of two-storey redevelopments into higher communal residential blocks. The interface was primarily disrupted through the introduction of the semi-basement. This created awkward and badly proportioned interfaces that compromised the relationship with the rest of the street, further necessitating long flights of stairs to the entry of the raised units, creating issues both when placed externally and internally. On the ground, the streetscape is a mix of undeveloped 2-storey dwellings sitting alongside '3-floorsplus-semi-basement' developments and more recent developments based on 4 full floors (or higher) and a corresponding higher presence of dead frontages with street-level garage entries (Fig.03). Within this diverse street context, the interface is relegated to a weak and inconsistent element that subsequently results in a poor street culture. Where semi-private front gardens are present, these have been demoted to communal access points for residents and vehicles, with the 'garden' element kept to a minimum.12

A similar inconsistency of interface may be observed within social housing estates.¹³ Open spaces are largely unarticulated leftover spaces, which are hardly used by residents, often due to inappropriateness of location, lack of visibility, low quality infrastructure and amenities and weak edge definition.¹⁴ Given the low public uptake, they are often



Fig.4 - Two realities of spatial appropriation, social housing estates (left) and OCAs in Valletta - Source: Authors 2022)

appropriated by the estate's residents, adding to the spaces' ambiguity as they are perceived as semi-private rather than public (or semi-public), resulting in a lower pedestrian footfall that leads to further spatial appropriation (Fig.04). Other examples of spatial appropriation, both informally and formally, abound throughout the Island, with formal instances established through the concession of public land, often for commercial purposes; specifically, to set up outdoor catering areas (OCAs). The demand for such spaces has been high particularly in the capital city of Valletta (Fig.04) and in waterfront localities such as Gzira.

The localities of Gzira and Hamrun, discussed below, offer several interesting insights. Located within the island's central conurbation, the chosen streets comprise linear commercial spines, in Hamrun's case (Fig.05) as a primary town centre that connects to Valletta and in the case of Gzira's seafront (Fig.06), tying into the important neighbouring centres of Msida and Sliema within the North Harbours zone. Their existence results from growth along commercial routes that became more established in time combined with specific property development. Over the past decades, these axes have been reinforced through infrastructure, becoming prominent movement corridors at the macro scale of the conurbation, as well as through planning policy that has designated their primarily commercial use.

Gżira's urban context is steadily transforming into a business and entertainment one, supported by ancillary uses, notably catering and entertainment. In turn, the context surrounding Hamrun's main road is replete with diverse commercial uses – ethnic and local eateries, bars, grocer and furniture shops and supply stores, with differing degrees of porosity.

Indeed, the interest of both case studies lies in their rich spatial complexity and an urbanity that is undergoing rapid change. This has enabled the development of a strong public interface throughout their extents. As a result, the case study areas exhibit various interface suspensions and extensions of various private entities. In addition, both streets are intense with pedestrian and vehicular activity, often in conflict with one another and both affecting the interface's nature.

Methodology

The adopted methodology in these streets is micro-spatial-behav-

ioural analysis,¹⁷ comprising philosophical input, physical exploration, and performance enquiry.¹⁸ Busy urban streets were observed on different occasions and diverse physical, social and spatial qualities were noted to understand how physical elements are used in space and how people move and react within the street. The researcher was positioned within the public space across from selected street stretches. Their choice was based on the varying interface nature, to ensure that different functions, structure, human occupancy, and material makeup would be analysed.

The interfaces were observed on different days and times. Photographs were taken regularly, and different city life actors were approached to discuss their experiences. The solid-to-void makeup was first marked on the photographed built faces to understand degrees of visibility. Objects spilling out from the private realms and others relating to public infrastructure were then highlighted. Several photos were collected to highlight individuals and their behaviour around the respective interfaces.

Following the photographic analysis, a typology framework was used to classify individual interfaces in terms of connection or separation of individual entities and the public network, based on adaptations and human activity. This framework, also a research outcome, was structured using the knowledge derived from urban analysis sources, particularly work done by Dovey & Wood (2015) and Bobić (2004).

The results are illustrated in the form of photographic streetscapes, mapped according to four observed typologies (Fig.07) as discussed hereunder, and based on three criteria:

Constant interface quality

Temporal, physical and spatial adaptation of interface

Temporal and everyday human interaction

Defining a typology framework

The key outcome of this research is the extraction of the four typologies that may be defined as follows, each differing in the degree or nature of overlapping (Fig.08):

Type 1 - Public realm penetrates the private entity. Here the edge is linked to the public realm and this relation continues beyond the property boundary into the individual realm. The imaginary street domain is broadened, with private life oriented towards the public. In Gzira this

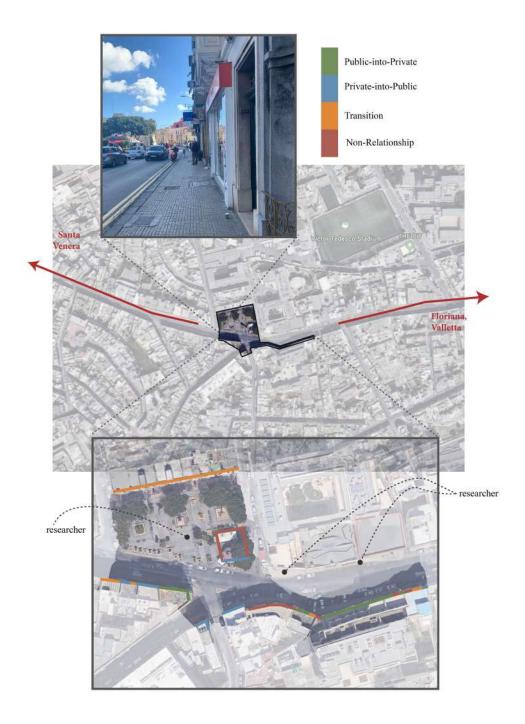


Fig.5 - Contextualising Hamrun, the case study area and interface typologies - Source: Authors 2022)

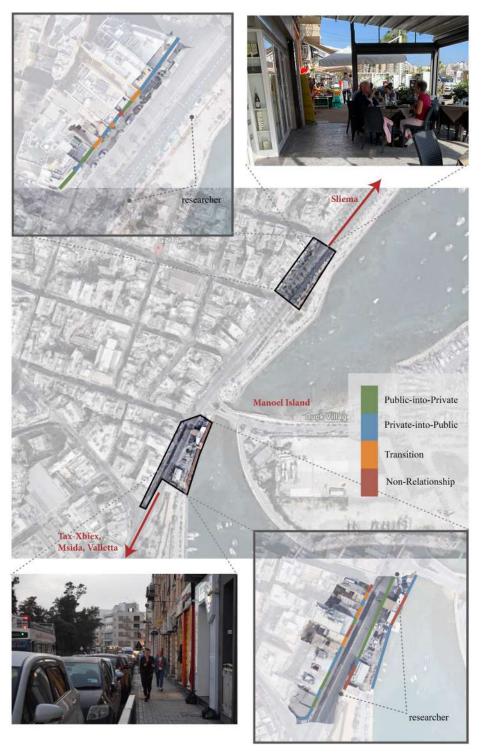


Fig.6 - Contextualising Gzira, the case study area and interface typologies - Source: Authors 2022)

is observed within open doors and permeable glass façades, allowing full visibility and vulnerability of the private realm and creating a strong connection with the public realm.

Type 2 - Private entity overlaps onto the public realm. Private interests may overlap onto the public space, through demarcation achieved by placement of objects or architectural elements. Evidence of such overlapping may also be seen through the programme adopted in the public space and people's use of it. In this sense, there is a degree of appropriation or control on the public realm by individual interests. In Gzira this is evidenced by the use for outdoor catering of the pavement adjacent to the bars and restaurants.

Type 3 - Public and private realms relate to each other, a sense of transition. An in-between space is created which is neither fully private nor public; there are elements relating to the public space and the private realm, and a buffer space evolves based on the relationship between the two. In both Gzira and Hamrun, there are several traditional interfaces featuring gates or steps at the entrances of residences. These serve as neutral spaces, belonging to the private realm, where one may view the street from a comfortable enclosure.

Type 4 - Public and private realms are separated and not overlapping. When there is a lack of spatial or visual permeability, the connection between realms is weak and functions are separated. There is a low degree of in-between space, which may be created using different physical elements. In Gzira and Hamrun, this is observed with blank walls, façade shutters and elements such as higher planters covering up the private realm and preventing visual connection.

The occurrence of these four interface types is given spatial and geographical relevance on plan in both localities (Fig.05 and Fig.06), enabling the researcher to visualise the entire streetscape, and punctures therein, in terms of interface porosity, human interaction and adaptations.

Re-theory - reinterpreting local observations

The activity within individual realms may extend outwards in subtle or bold ways. Such extensions may mature into formal appropriation by way of physical and/or social means. These two types of extensions each feature more strongly in Hamrun's and Gzira's streets respectively.

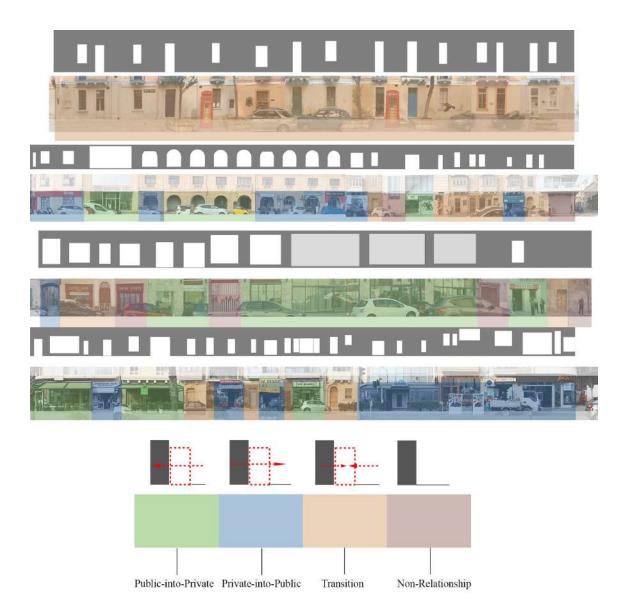


Fig.7 - Interface mapping - a sample of streets in Gzira and Hamrun are featured and colour-coded according to the typology pertaining to the socio-spatial observations - Source: Authors 2022)

The subtle extension – social demographics and street perception

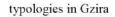
This extension is particularly typified by the established interfaces of so-called *kazini* (social clubs), wherein (primarily) men gather, chat, and consume drinks, inside the building and at its threshold. They spill out, overloading the narrow pavement running along the busy, vehicular spine and gather at the closest street corner. Such spaces have become hotspots; indeed, in Hamrun, traffic barriers were installed along the pavement edge to avoid pedestrians getting injured, many of whom are forced to walk on the road due to the high volumes of individuals. These individuals are the objects which are extending outwards, marking the space as their own.

Social activity continues onto the pavement and the neighbouring doorsteps and street users use both public and private furniture to sit, chat and agglomerate (Fig.09). Experienced and frequent users claimed that these areas represent broader phenomena occurring within the rest of the urban environment. Furthermore, several women stated that they could perceive men's stronger claims on these spaces, despite a mix of street users. Indeed, in Hamrun, unlike Gzira, it was observed that individual demographic groups separately territorialise different public space edges.

The bold extension and formal claims on space: public-private trade off

The private realm may embrace or reject the public based on degrees of visibility and extensions, creating a trade-off between opposing domains. At the line of demarcation, the private realm is vulnerable to the public realm, which may penetrate the private space and have a stake in its function. In some cases, there is full visibility of the private realm where the street is used as an attractive element and blurs into the private.

Several types of commercial relationships with the public realm were observed, featuring informal and formal modes of overlapping. In Gzira, the latter were more evident. Awnings completely covered the pavement from edge to edge as tables were placed outside, leaving a public 'corridor space' for passers-by to commute. Some establishments eliminated barriers from pedestrians with fully open façades, creating a blurred public-private area extending both inwards and out-









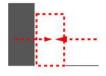
Public-into-Private



Private-into-Public







Transition



Non-Relationship

Fig.8 - Interface typology - four relationships between public and private - Source: Authors 2022)















Fig.9 - (top) The social edge - photographs and sketches illustrate how people and objects interact within a recess (left) and spill out from the building front (right); (bottom) The fine line between the commercial and the public - Source: Authors 2022

wards. Other catering areas were excessive, as umbrellas, tables, chairs, signs, and people sprawled on the pavements, public squares and parking areas (Fig.09).

Both towns are developing in a piecemeal manner, with commercial permits issued on a case-by-case basis and in the absence of a strategic vision or masterplan. Therefore, there are informal infrastructure boundaries that in turn create awkward spaces which are appropriated by either vehicles (the road space) or consumers (the pavement space and space previously occupied by on-street parking bays), leaving little to no space for street users to manoeuvre, let alone to use the space equitably for social purposes. There is indeed a fine line between the (positive) activation of space, with the opening of the private realm, and (negative) excessive claims on space, which in turn creates an imbalance in the 'contents' of the public space, in terms of area for pedestrians, cyclists, OCAs and road infrastructure.

In this sense, we observe an appropriation game which is furthermore desired from a policy perspective, given that it is also a powerful tool in revitalising public space. This argument is heightened in an island-city which has to date depended economically on tourism, evidenced by central government-initiated policy objectives that emphasise tourism potential and consumption rather than longer-term objectives such as liveability.

Conclusion - towards an interface approach

This paper studies physical elements and human interaction at the street edge, from which themes relating to familiarity, the imbalance between infrastructure and pedestrian space and public-private trade off through visibility and encroachment arise. Observations evidence several types of public flows in public space, reminding us of the different interests that have a stake in the interface. The utility of interface analysis, as part of more comprehensive urban analysis, is in the ability to understand public space as a layering of different degrees of 'publicness' and 'privateness'.

The interface approach re-examines the role of the edge vis-à-vis public space. In Malta, an interface context may be unearthed with many vernacular houses and commercial outlets, portraying the ability of reciprocity between realms, and an understanding that public and private life may intersect in creative ways. Snippets of intimacy from

private life may interact with public networks and commercial units may incentivise the activation of public space if interface parameters are studied and sensitively designed. The case studies illustrate the potential of the edges of the public network; a point of encounter for different demographics of street users resulting in an emergence of social flows positively contributing to street culture. These are easier to resolve in the subtle extensions, although the limitations of physical infrastructure may hamper the experience of these interfaces and create safety concerns when conflicting with significant vehicular presence.

The same cannot be said of many new residential developments, which negate the street and develop an individual language wherein the interface is relegated to a functional asset as opposed to a potentially meaningful social space that may provide an added richness to the street context. The ground floor interface is rarely activated and features bare front yards, access stairs, garages and harsh edges due to blank walls that are incompatible with the human scale. Planning policy is primarily a quantitative concern, with most developers interested in obtaining maximum floor area with a modular construction, removing the ability for architects and urban designers to create solutions for neighbourhood liveability.

In this vein, there is ample scope to potentially reinforce street culture, particularly focusing on the local street network. More appropriate street-level guidance, geared at the neighbourhood scale, is required that addresses both spatial considerations of streets (for instance, in terms of rethinking spatial allocation to various street users) and urban form, paying attention to building frontage and/or the front garden's definition (where present). In this junction, a newfound understanding and appreciation of the role of the interface within street analysis becomes critical; one that must feed into policymaking, to ensure the production of a spatial relationship that prioritises democratic practices – creating space for people, integrating green infrastructure and balancing out urban vitality (and commercial opportunities) with longer-term liveability targets. In the short term it may already be possible to pilot some initiatives within areas such as social housing estates, which offer a spatial canvas that demands rethinking.

On the other end of the spectrum, interface results also speak to the

use of commercial development in activating urban space. Again, the solution is very much policy based. Current generic OCA policies should be replaced by specific, context-based policies that address the entire extent of physical infrastructure and seek to resolve the imbalance currently skewed in favour of individual commercial interests at the expense of public concerns and green infrastructure.

The solutions to urban vitality stem from treating street and building in symbiosis – and creating a living space for all street users, enriched through different layers of visibility. Allowing for individual objects to be placed thoughtfully may allow for human interaction and flexible street use. As seen in Hamrun, streets may be rethought as linear progressions of small public pockets that provide for such flexibility (Fig.10). In tandem, their role as mono-functional traffic conduits needs to be requestioned, particularly as it remains a high priority on the agendas of infrastructural agencies and transport authorities. The recent Slow Streets Malta project attempts to reclaim space back for pedestrians and cyclists and prioritises safe and secure mobility for street users, rethinking street sections to achieve a better spatial balance and using tactical urbanism to pilot solutions with the local communities.¹⁹

As the needs of a changing demographic, in socio-economic and socio-cultural terms, are revalued and restructured, the interface may constitute the missing policy and design tool that may help architects, designers and planning assessors alike in ensuring that newer developments are better suited to their existing street contexts and help in creating stronger communities and enriching neighbourhoods.

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Designing ordinary public space, between revealed potential and public stance. The case of Viale Ottavio Mai in Turin

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Abstract

As a space of collective interaction, the multi-dimensional streets allow investigating the adaptivity in terms of social, climate and use. While architecture projects and placemaking processes have been realised, ordinary residual open spaces in the urban environment are still misused or poorly executed. Which European actions and architectural design strategies can be adopted to create such public spaces?

From this perspective, the viale Mai case study in Turin shows contradictions between its hidden potential and its actual transformation. Located in a vibrant city, where university hubs and adaptive urban renovations occur, the viale Mai is an underused and awaiting transformation street close to the new University Campus Einaudi. The site has been assumed by an academic reflection with students during three years in a Design Studio at the Polytechnic of Turin as the topic. Today, it is a new public space project held by the municipality of Turin for the European program UIA – Tonite.

The complexity of architectural projects, demonstrated by students' work based on the critical thinking of adaptive public space, climate change, and environmental comfort, appears to be in contrast with the results of public action. Indeed, to enhance the viale Mai potential, the contribution underlines the difference between two approaches: academia's problem-setting and the problem-solving led by public action.

Keywords

Ordinary street, adaptive open space, problem setting, interdisciplinary design studio, research by design.

Streets: the central role of ordinary public spaces

In cities, different groups cohabit within fragmented urban contexts affected by climatic, environmental, economic, and social phenomena¹². In such increasing complexity, offering a space for coexistence and equality is a challenging objective to pursue. Therefore, a new transformative approach and methodological paradigms are required to enable urbanists and designers to set up resilient governance and spaces³. According to the "eulogy of discard" (elogio dello scarto)⁴, this contribution aims to create a positive sense for the leftover city⁵ through the ordinary public space⁶. Abandoned areas⁷, drosscapes⁸, terrain vaques9 with an indeterminate shape, neglected most of the time within the prevailing patterns of urban use, reveal hidden but powerful resources of cities¹⁰. Related to the principles of everyday urbanism¹¹, such as a frame that holds together the ordinary and the extraordinary¹² the inverse city seeks its meaning in everyday life. As François Jullien also stated, "to make a discard (écart) means to set out from the norm, to advance in an unusual way, to shift from what is expected and conventional"13. The ordinary cities contain extraordinary "spaces of the possible" where the potential for transformation is unseen. Such space 'belongs' to everyone; city streets are the emblematic ordinary and shared spaces where exchange and expression occur¹⁴. In addition, every urban place has a spatial, economic and social specificity transferred to the street, making it take on unique forms and configurations¹⁵.

The public space regeneration. Towards new attitude in design and policies.

European policies, national and local ones, are increasingly focused and funded on the re-generation of residual open public spaces¹⁶. Instead of the already exhausted problem-solving centred on the exploration of 'what' to do, European actions are oriented towards a 'problem-setting' approach, i.e. 'how' to act. Generally speaking, "through

the selection, from available means, of the one best, suited to established ends"¹⁷ the problem solving approach handles problems recognised as already given. This problem–solving attitude was common in European urban design during the '80s. Public spaces projects, seen in cities like Barcelona, Berlin, and Lyon¹⁸, responded to common functions and practices by formalizing new configurations through the modelling of soils and the placement of urban furniture and lighting.

On the other hand, in recent times, a heightened complexity has been acknowledged in various types of problems, particularly in urban matters. Trends related to mobility, liveability, interactions and uses, climate, and sustainability are increasingly compounding the complexity of the urban system. In such cases, the problem-solving approach is not sufficient because "a conflict of ends cannot be resolved by the use of techniques derived from applied research. It is rather through the nontechnical process of framing the problematic situation that we may organise and clarify both the ends to be achieved and the possible means of achieving them" both the several issues are intertwined, it is mandatory to "set the problem" to frame the context and the goals before applying one or more solutions. Public spaces and streets are contexts in which the complexity and limitations of a problem-solving approach may be highlighted.

European action.

Everyday and tactical urbanism policies are widely supported within the 2021 and 2027 European programs. Several street space projects actively involve and encourage practices of stakeholder participation, co-design, citizen engagement, and bottom-up approach²¹. Within these self-management spaces, the layout is often simple so as to respond to simple needs, such as meeting, standing, playing, and urban gardening, in a mix between pedagogy and architecture²². One particularly remarkable program is the NEB - New European Bauhaus²³. Its manifesto focuses on tactical urban practices, presenting a formula. This perspective not only regards sustainability as a goal-driven but also champions the inclusion of citizens and all potential actors. Moreover, it extends an invitation for proposals that embrace a land-scape-based design approach submitted by artists, designers, architects, and engineers or young researchers, joined with institutions and communities and dense with immaterial meanings and values.

National and local action.

At the Italian national level, the NRRP²⁴, considers the historical/artistic vocations of our heritage without any opposition to the degradation of marginal areas within urban territories. In the recent past, ambitious plans, notably the City Plan (2012) and the Periphery Plan (2014), appear to have faltered due to an excessive focus on problem-solving rather than problem-setting, This is why defining and establishing design guidelines in alignment with the envolving urban context has proven to be challenging. More specifically, local urban contexts come with inherent limitations, including the substantial maintenance costs associated with public space and the lack of nonupgraded human resources at the municipal technical offices.

The outcomes of European Programmes in Turin. The impact on the territory.

Located in northwestern Italy and the regional capital of Piedmont, Turin is known for its historical significance as the political capital of the Savoy Empire and then the national republic. Notably, the city is recognised as a company town due to it was an industrial production hub in the early XX century. The key sectors included the mechanical industry, exemplified by the presence of the Lingotto and Mirafiori factories under the Fiat banner, along with textiles, food, rubber, and textile industries.25 A period of deep deindustrialisation and widespread decommissioning in the early 1980s was contrasted in the first decade of the 2000s with a flourishing period of radical urban transformation²⁶. The aim was to reshape Turin's image, making the city a destination that was both attractive to tourists and culturally vibrant. In fact, from the beginning of the XXI century to the present, Turin stands as a unique case in Italy having witnessed significant post-industry innovative policies for urban regeneration and participatory governance processes. This has resulted in the emergence of new spatial and social identities, as well as flexible and adaptive cultural perspectives²⁷. Furthermore, the city has experienced fallout from such conjunction with implications on the quality of public space²⁸.

Substantial national and European funding marked the first innovative policies for pursuing the so-called 'complex' regeneration pro-

grams. These initiatives successfully balanced public-private collaborations and institutional initiatives in partnership with universities, placing Turin at the forefront of national urban development. ²⁹. Projects for the regulation and management of urban commons include the Rete di Case del Quartiere³⁰ project at the local scale and at the European level programs such as URBAN³¹, UIA Co-City³² and AxTO³³ projects. These multi-sectoral approaches and innovative models of urban co-governance empowered the administration to deal with complex urban challenges, leading to the creation of innovative co-design processes in a trustful interaction between the public and social actors³⁴. This paper will consider the UIA Urban Security "ToNite"35 instance, launched in February 2020. In conjunction with the Co-City civic involvement, this three-year European project focused on improving the liveability of underused sites in the Dora River area. Among 19 selected sites, the City of Turin's team of technicians identified two public spaces for rehabilitation projects. These strategic sites were chosen due to their inherent development potential. One of the two selected projects, Viale Mai a short section of street located close to the new University Campus Luigi Einaudi, serves as our case study.

Viale Ottavio Mai case study: from an unfinished urban axis towards a new urban street.

The street, named Viale Ottavio Mai, is a central segment of an urban axis that traverses one of Turin's rivers, the Dora Riparia, in the northern sector of the city³⁶. The planning of Viale Mai is rooted in the Regulatory Plans of 1906 and 1926, maintaining continuity with the nineteenth-century urban plot. (fig.01)

However, the presence of industrial gasometers in the proximity, marking one of the city's earliest manufacturing sites, resulted in the road axis remaining uncompleted in the section between the Viale Farini (eastern sector) and Viale Verona (western sector). Based on the PRG by Gregotti & Associati in 1995, only the recent transformation programs allocated consistent university facilities on the site. (fig.02)

The dismission of the industrial site in the early '80 and the reconversion into a university facilities complex has been possible thanks to the 2006 Winter Olympics when the Olympic Village Media was built. This area was subsequently reconverted into the EDISU university stu-



Fig.1 - Detail of Vanchiglia area and the Dora river. Above General Regulatory Plan of the Municipality of Turin, 1906–1908, and below a variant of 1926 PRG - Source: City of Turin 1906, 1926

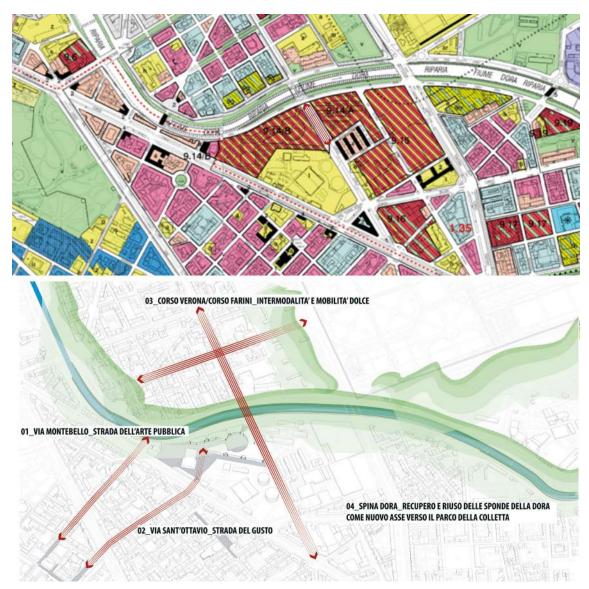


Fig.2 02 - Above: a detail of Vanchiglia area and the Dora river. General Regulatory Plan of the Municipality of Turin, Source: Gregotti Associati Studio, 1995; below axes and project opportunities in the relationship between Campus and city - source: Urban Center Metropolitano, Campus Luigi Einaudi, and territory: a working dossier, Source: UCM 2014

dent housing, and in 2012, the area was implemented with the University Campus "Luigi Einaudi',' designed by Sir Norman Foster. After more than a century, the urban plot was finally achieved. (fig.03)

The new urban layout represents a paradigmatic transformation process through building design, despite any vision of the surrounding public spaces. The completion of the east-west urban axis owes its achievement to two main factors. Firstly, the continuity through viale Ottavio Mai and the footbridge over the Dora Riparia river provide a vital link to the city centre (on the east side). Secondly, the Aurora district is transforming in the west. Together, they offer opportunities to to rediscover and reassign spaces with new roles. These facilitate collective urban practices related to social interactions, mobility, and urban living. Above all, they foster an understanding of the transformation processes and the values that may emerge.

The hundred-meter-long Viale Mai, alongside Foster's Campus Luigi Einaudi (shortly called CLE), plays a pivotal logistical role in mediating between the city, the university settlements, and environmental issues within the urban landscape. Despite these spatial conditions, the relationship between the open space fabric and the new university facilities remains unsettled. While the university student house EDISU is built as a closed perimeter and out of alignment with the dominant urban matrix, the CLE, despite its distinctive architectural quality, appears as an out-of-scale (or oversized) architectural object that remains somewhat indifferent to the surrounding urban periphery. Despite architectural developments, Viale Ottavio Mai has remained a construction site for over a decade, where a row of plantain trees was planted. The CLE project placed only a narrow greenbelt to create an elevation difference with the street, and the EDISU student housing complex lacked adequate street lighting. Fortunately, vehicular traffic was prohibited, yet no plans were made for students or alternative use of the public space. Moreover, any kind of activity - formal or informal - has been proposed or temporarily experimented with by the university or the municipality, which nevertheless has been it to public use. (fig.04)

A potentially empty open space near public buildings, linking two riverbanks and two neighbourhoods, lay unused, unsafe, and almost abandoned, producing a paradoxical urban condition. Nevertheless, the

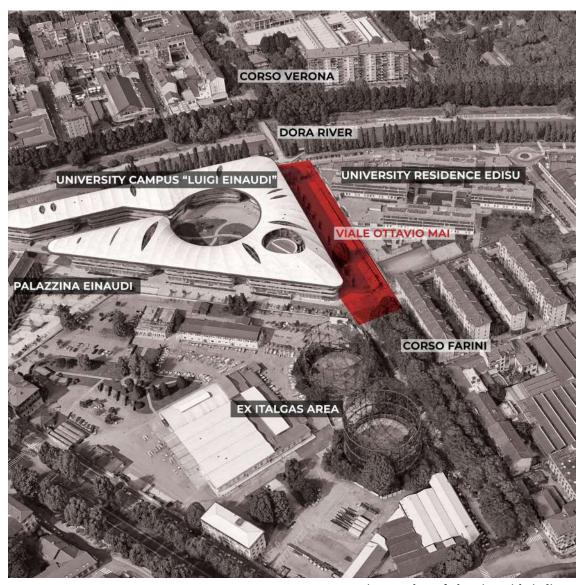


Fig.3 - Plan of the site with indications of the relevant existing buildings.- Source: Atelier INSIDE_OUTSIDE, 2016

new urban condition and the introduction of university facilities have quickly produced a functional, temporal and spatial gap. This gap has catalyzed a series of re-signification processes in the proximity areas where bottom-up re-appropriation practices and citizenship actions are related or not to the university. This phenomenon has raised the two local universities' interest. Following the inauguration of the CLE, a group of University of Turin lecturers, led by Professor Egidio Dansero, reflected on the relationship between the new university campus and the broader territory. This research initiative, named the "CLE e/è territorio" Research-Formation Observatory, evolved from this reflection. The CLE campus was assimilated into the territory as a "transitional space" undergoing transformation. It formed a network of both open and enclosed spaces where material and immaterial inhabitation practices took place³⁷. Moreover, the past and future vocations of these places³⁸ raised new potential functions and ordinary social interactions.

Interdisciplinary landscapes. A teaching experience between pedagogy, questioning research, and design.

The core of research and educational interest for the INSIDE/OUT-SIDE Design Studio (today Adaptive Open Spaces) at Polytechnic of Turin lies in the need to reflect and propose new urban spatial configurations that "reveal new scenarios where there is degradation and abandonment¹¹³⁹. With an integrated teaching model, three modules with different disciplinary fields shared the common view that the design actions need a cohesive vision to investigate complex settings to suggest a "change of state" for the public space design40. The design studio syllabus is training-oriented to explore the new role open space plays in urban regeneration processes, and its possible design transformations for public use, based on a thorough knowledge of the places historical, geomorphological, built, social, and environmental⁴¹. The overarching objective is to envision multiple interpretations of the urban landscape42 as culturally significant, systemically sustainable, and socially shared places. On these assumptions, a holistic approach synergises and enables the course to provide theoretical, methodological, and design insights encompassing architecture and urban design, environmental design, and technologies and energies for the environ-



Fig.4 - Viale Ottavio Mai in 2016 - Source: Authors, 2016

ment⁴³. Although the strong bond, each discipline maintains its distinct identity. Architectural design explores the rehabilitation of urban public space through the lens of contemporary city ecological transitions, eco-systemic urban landscape, and adaptive and resilient open space. Environmental design aims to set up the urban scene through the principles of demanding design, systemic eco-design approach and contextually sensitive design. Technologies and energies for the environment furnish the tools to address the physical and technical challenges related to soundscape, lightscape and outdoor thermal and environmental comfort, all aligned with current regulations governing noise and light pollution control in outdoor settings. Over the span of three academic years, from 2016 to 2019, the Design Studio involved about one hundred master's students of architecture for three semesters. These students, working in groups of 2-3 members, carried out architectural investigations in public spaces within medium-small ordinary urban sites marked by contemporary critical issues: use practices, environmental and climate risks, feeling of safety, mobility issues, and outdoor wellbeing. The goal of "INSIDE/OUTSIDE" Design Studio aims to compare its design attitudes and investigate potential news assets with the more updated and troubling sites in the urban area of Turin, such as the public open spaces surrounding the two main urban universities campus in town: the brand new Campus Luigi Einaudi (design by Sir Norman Foster) by the University of Turin and the Cittadella Politecnica, the extension of Polytechnic of Turin reusing a dismissed railways fields. As almost entirely neglected by the architectural transformations, the potential of open spaces inside and around university spaces, were assumed for three academic years as design areas. Here, using architectural design as a testing tool44, facilitates a problem-setting approach to the exploration of novel and unconventional appropriations of public space. Streets and residual urban spaces are considered as an "intermediate space to encourage a social space between general and particular public life" to encourage and imagine "the informal exchange (that) can often take place in these very ordinary spaces, precisely because such spaces could not explicitly belong to any specific group or institution."49

Evidence of complexities: the design studio's results.

With this framework, adaptive design solutions outcoming from the INSIDE/OUTSIDE Design Studio could offer alternative views of the city⁴⁵⁴⁶. Design solutions are oriented towards enhancing user integration and interaction between people and places and promoting environmental quality, from visual and thermo-acoustic well-being to appropriately using renewable energy and smart technologies. Utilising the research-by-design method, the students' projects aim to look beyond the micro-local scale in identifying conceptual and intervention models on urban public space that could confirm the identity character of Turin, both traditional and innovative. Four distinctive approaches for Viale Ottavio Mai have emerged from among the eighteen project proposals. They mainly focus on the adaptability of multiple practices, the remodelling of the ground as the main tactical design approach, the renaturalisation actions, and interactive and sharing interventions for sustainable urban regeneration. The selection of the following students' projects will illustrate these models.

An adaptable public space.

The open space is poorly infrastructure, providing the flexibility to accommodate and stimulate diversified uses, ordinary and alternative, over time, to drive innovative and disruptive practices thanks to temporary configurations and installations. The project "The M.E. line. (The Multi-Ethnic line)" (fig.05) propose a deep understanding of the district's participatory "inside", made up of multicultural and intergenerational citizen, to determine "outside" design solutions not so relevant transformative as inclusive of the cultural diversity of the contest. Three main places, inspired by ethnic and multicultural influences, are formally interconnected by continuous pedestrian and bicycle paths, weaving together and providing cohesion to a fragmented and disconnected area.

Public space as a project of soil.

This concept envisions the place as an artificial orography that engages people in new practices within open spaces, offering an alternative to a traditional horizontal space to be equipped with urban furniture. Here viale Ottavio Mai is assumed as a flexible and uninterrupted continuity entity. This perspective of (micro) landscape reinforces its identity as a space in permanent mutation and redefini-



Fig.5 05 - Design Studio Project "The M.E. line. (The Multi-Ethnic line)" - Source: Dario Cangani and Beatrice Piccirillo, 2019

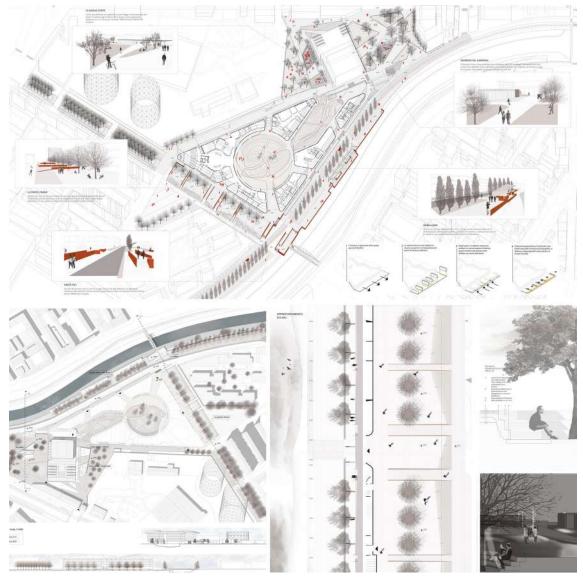


Fig.6 - Design Studio Project - "Trame in Campus" - Source: Camilla Maré, Silvia Meterc and Giulia Musso, 2017



Fig.7 - Design Studio Project "Re. vege.To" - Source: Paolo Bianco and Marcella Procaccini, 2019

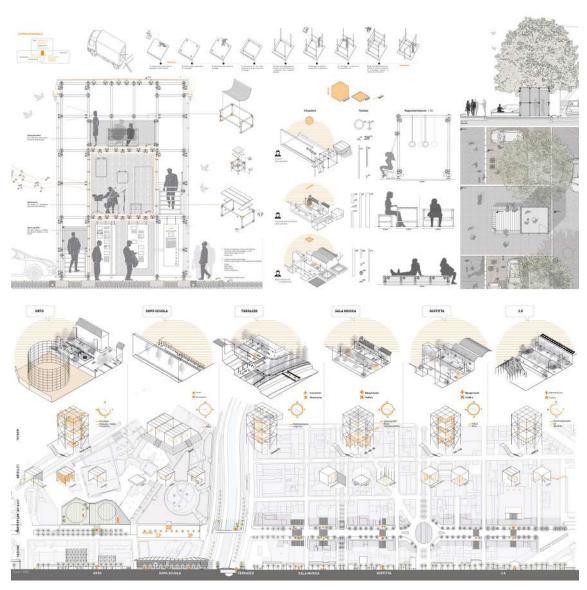


Fig.8 - Design Studio Project "Tot(h)em" - Source: Lucia Miglietta and Mattia Salvador, 2019

tion. "Trame in Campus" (fig.06) is a project that architecturally translates the articulation of the ground in the relationship between the university and the pedestrian axis. It achieves this through a system of linear squares and regulated floor levels, incorporating partitions, steps and ramps. At the same time, the path and the squares generate additional spaces for interaction, leisure and relaxation, defining flexible areas for recreational and outdoor activities.

Interactive and shared public space.

Freed from substantial spatial transformation and functional customization, the place is taken back to mixed communities' hybrid and flexible uses. The "Tot(h)em" (fig.08) project proposes a tactical urbanism approach declined through simple, modular and flexible small-architectural solutions able to offer micro-spaces distributed in the area, conceived according to reversible, temporary, and implementable systems. Also, this proposal works not through significant transformative interventions but with a project to provide an open space serving as both a social hub and a catalyst for unconventional practices, opportunities, and interaction among users, as well as cultural, artistic and social realities of the district.

ToNite, a design approach as a functional program response

The Polito design-based research groups presented the outcomes of the design studio to the Municipality of Turin and UniTo. Two exhibitions were held in the Main Hall of the CLE (fig.09) to formally contribute to developing new functional and innovative design solutions for the site. Moreover, in 2020, a public discussion forum was organized as part of the UIA "ToNite" design program. These meetings highlighted the necessity of finalizing the design phase, characterized by an unstructured and almost informal discussion on architectural aspects.

Nevertheless, the viale Ottavio Mai project was carried out by architects working in public technical offices, where usual working conditions are affected by time and technical staff shortages. Despite these conditions, the realised project, open to citizens on the 5th of October 2022, follows some programmatic guidelines that emerged from interactions with university groups and residents.

The main functions that have been confirmed were a small area for outdoor events, areas for street food, an outdoor study place, and a bar corner. In addition, some nature-based solutions, as proposed in certain student scenarios – including a rain garden, depaying, and planting additional trees – were considered. Furthermore, the UIA "ToNite" program aimed to create a new equipped pedestrian area to enhance liveability and accessibility while preventing urban decay by developing "security by design" in areas close to the Dora River and the CLE.

The architectural concept devised by city designers involves the interconnection of specialized paths (pedestrian, bicycle, emergency road, etc.), formalized through a series of lines traced on the ground. (fig.10) On one side of the area, a linear rain garden and plantings of shrubs, hedges, and herbaceous species are distinctly separated from the adjacent cycle path. In front of the area, a double row of trees follows the existing Corso Farini double tree line. In this zone, street furniture for socialisation and leisure has been provided, including a 20-meter community table, various types of seating, ping pong tables, and shade structures. Lastly, a public lighting system has been installed, and the project features a continuous surface ground composed of different paving typologies, including incorporating asphalt, limestone, self-locking concrete blocks, and partial reuse of the existing crushed gravel paving.

Revealing or wasting the potential of a street. A design method to overcome.

As affirmed by existing literature and institutional funding policies, minor and underused streets or areas play a non-marginal role in the contemporary city's public space. However, public administration often overlooks these minor streets and short road segments despite their crucial role in the broader regeneration processes.

As evidenced by the case study of Viale Ottavio Mai, despite district-level functional and architectural development, the ordinary space of the street is invested with less strategic and design attention compared to the quality and architectural value given to the surrounding buildings.

Moreover, the relevance of this street section was only highlighted through academic inquiries, extending the attention of the City of Turin. As we pointed out, the official adopted design for Viale Ottavio Mai is based on the set up of specialised spaces and street furniture

INTORNO AL CAMPUS

da SPAZIO a LUOGO

temi e progetti per le aree pubbliche del polo univesitario Luigi Einaudi



PRE-VISIONI SUL MAI

dal 12 al 16 MARZO 2018 Main Hall Campus Luigi Einaudi



Fig.9 - Poster of two exhibitions in the CLE main hall - Source: Authors 2018



Fig.10 - The Viale Ottavio Mai project - ToNite UIA Torino - Source: Città di Torino - Dipartimento Fondi Europei; designed by Divisione Ambiente, Verde e Protezione Civile - Area Trasformazione Periferie - Beni Comuni - Periferie e Arredo. Below photo source: authors, 2022

placement. Also, it is lacking integrated innovative solutions, both technical and architectural, to establish functional and formal issues.

Due to the inadequate consideration of complex university neighborhood dynamics, the project risks overlooking prevailing trends in contemporary public spaces. Today, in fact, the new collective practices, the climate change adaptive strategies, and the new forms of sustainable mobility are assuming a crucial role in the choice of architectural solutions, contrasting the authorial design approach of the latest decades.

Meanwhile, the Design Studio's projects developed by young students pointed out contemporary issues and visions with technical and formal solutions aligned with the innovative European programs. These solutions would have fostered new imaginaries of public space better suited to the urban needs and practices of the university community and, at the same time, to the inhabitants of the surrounding neighborhoods.

The case study of Viale Ottavio Mai highlights certain weaknesses linked to the usual "Public Works" design practice process. Without a broader dialogue with experts and a multidisciplinary academic design-based approach, projects tend to cater to existing forms of public space habitation. In contrast, adopting a problem-setting attitude and disciplinary integration could lead to more appropriate designs that enhance existing forms of inhabiting public space.

In conclusion, the students' projects are remarkable for unveiling the strategic potential role of streets in fostering a new identity and enhancing livability in a changing urban sector. It should be in the interest of the decisional and technical departments of the municipality of the city (Turin, in this case) to recognize and harness this untapped potential. To overcome this alternative approach – problem setting vs problem solving –, and to create more vibrant and responsive public spaces, the academic approach offers valuable insights for the more technical design solutions led by public offices.

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- 31 From 1994 to 2016, several editions of European Urban programmes funded European cities' urban projects aimed to reduce urban decay, both physical and social. Turin focused on the reuse disused buildings and industrial areas interventions for the creation of urban welfare programmes and facilities. These include, among others, three main interventions in the suburbs of Mirafiori Nord (Urban 2 Mirafiori 2001–2009) and Barriera di Milano (Urban Barriera 2011–2015).
 - 32 In 2016, the City of Turin approved the Regulation of Common

Goods, entrusting the management of the regulation and the organization of agreements to the European urban development project UIA – Urban Innovative Actions – Co–City. Thanks to a European Regional Development Fund, the project is being conducted between March 2017 and February 2020 and has seen the involvement of the national ANCI, University of Turin (Department of Informatics and Department of Law), Cascina Roccafranca Foundation, and the Neighborhood Homes Network. CO–CITY was reported by the European Council as one of the ten best projects with social impact on the territory. Moreover, it has been recognized as one of the most innovative projects implemented in Europe, and presented at the Cities Forum in Oporto on January 30 and 31, 2020.

- 33 AxTO Actions for Turin's suburbs deals with urban regeneration initiatives and urban welfare models.
- 34 Pica K., Tonti I. (2022) "Spazi della dismissione o della contrazione? Esperienze di rigenerazione urbana area based a Torino" in Caldarice O., Cotella G., Lazzarini L., Vassallo I. (forthcoming, curated by), *Pianificare la città in contrazione. Pratiche di ricerca e traiettorie progettuali*, Milano-Roma: Planum Publisher
 - 35 UIA Urban Innovavion Action Urban Security "ToNite"
- 36 Devoti, C. (2014). Il comparto ex Italgas: un'area di cerniera urbana. *Atti e Rassegna Tecnica Della Società Degli Ingegneri e Degli Architetti in Torino*, *LXVIII*, n.(La regola e l'eccezione. Il Campus Einaudi dell'Università di Torino), 32–40.
- 37 The University of Turin and the Metropolitan Urban Center (UCM) collaborated to draw up a preliminary dossier on the relationship between the Campus and the territory, laying the basis for further relations with Polito. As a result the organisation of a crowdmapping activity has been realized, such maps highlighted the potential role of the CLE as a hub.
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