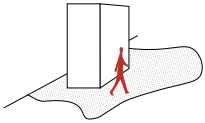
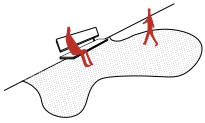
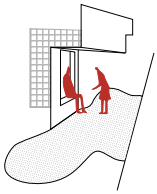
Carlijn Linssen

The social aspect of the street







The social aspect of the street

Delft University of Technology
Department of Architecture (Complex Projects)

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Studio Coordinator: Hrvoje Smidihen

Seminar tutors:Yang Zhang, Tino Mager

Studio tutor:Jelmer van Zalingen

‘‘The street can still be the place where the most important connections are made. In it, we begin to see how our home is connected to that home, this house to that house, this street to that street, this city to all those cities, my experience to yours.‘‘

- Peter Jukes

Foreword

This research started with a fascination about a public place for everyone—but questioning if this public place is really a public place or a transitional space. To create a better understanding of the streets, different street typologies have been analyzed through different periods.

The topic of migration of ideas gave an extra dimension to the research, as the ideas and designs of streets also have been migrated worldwide. This opened a new perspective in the study itself.

The graduation process exists of two parts, one side the research and the other side the design process. Those two elements have been separated into two booklets, a research booklet, and a design booklet. The conclusion from the research booklet will play a significant role in the design booklet. However, the research booklet kept expanding during the design process.

The studio Complex Projects give me the opportunity to dive into the research part, which created the base for the design project. In the beginning, it was not always easy to separate the research from the design; however it created a new perspective in the graduation process. I would like to express some words

of gratitude to those who helped me during the graduation process. Firstly, to my mentors, who supported me the whole graduation year. To Yang, for inspiring and supporting me through the research part and the research booklet. To Tino, for challenging the research and creating new perspectives in the research itself.
To Jelmer and Hrvoje, for supporting the graduation process from the beginning till the end with a lot of enthusiasm.

Furthermore to my beloved friends, and especially to Sanne, Emily, Esther, my housemates, and groupmates for all the positive talks, suportive feedback and homemade coffee.

To my parents, who have always supported me with a lot of positivity and love during the architecture journey.

And finally, to Donnie for the always positive support, the critical mind, loving, and caring - and for all the conversations and interest in the project.

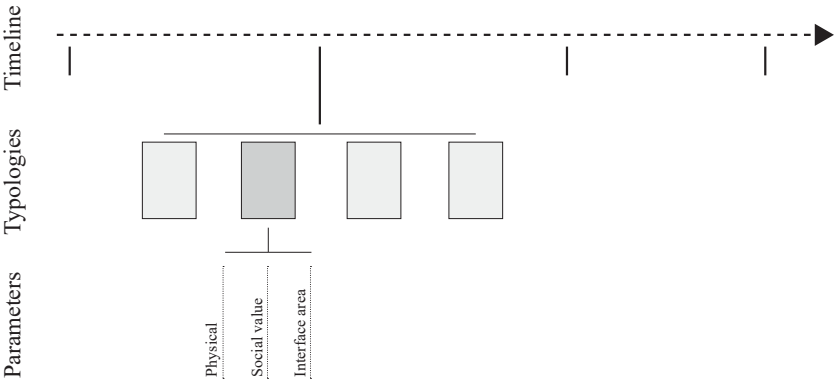
Thank you all.

Organisation booklet

The document exist of two parts, one booklet will focus on the research part and the other booklet will focus on the design aspect.

The research booklet is organized in three layers. The chapters are organized chronological and explained with different street typologies of that time period worldwide. Those different typologies are analyzed by three types of parameters: physical, social value and interface area. Finally, the booklet will be a toolbox for the design of a street.

Research booklet



Worldmap

Table of Content

Definition of a social street

Street: Definition

What makes something a street? ‘The street is a place where human movement takes place. An individual may mark out a path in a wilderness: but unless others follow him, his path never becomes a road or street’.[1] So, certain elements are needed to create a street, for example, buildings. The word ‘street’ is commonly used in different contexts. ‘In the newspapers, streets are synonymous with the unruly aspects of urban scenes – street people, street gangs, demonstrations, and accidents. Yet the press also reflects their positive associations with parades, sidewalk cafes, vendors, and outdoor performances. Celebrated in literature, music, and the movies, streets embody social life and its memories’.[2] The street can be seen, by some people, as a place of social interaction, a place for public life, or a way to experience the city. In this research, the definition of the street exists of three aspects; physically, cultural, and the connection part.

- *Physically,* a street is a three-dimensional space, where the buildings create boundaries.

- *Culturally,* it is an ultimate melting pot due to its public and accessible nature

- *Connection,* a place that creates connection and interaction between people itself and the surrounding.

Social value: Definition

Social value is a word that is often used in architecture research, mostly in many different contexts. The definition from the author that will be used for this research paper is; the social value is the sum of interactions that result of passive and active activities. This paper focussed specifically on social value in the public domain.

An open-minded atmosphere can create passive and active activities in the street, which allows strangers to meet and behave socially.

Greeting old friends, Bilbao - Jan Gehl

“The street is a place where human movement takes place. An individual may mark out a path in a wilderness: but unless he is followed by others, his path never becomes a road or street. ”

- Alberto Bull

Social value in relationship with the street

Theories of the social value on the street

Social behavior on the street can be seen as a result of the interaction between people, that can be created through various spaces. Many factors can influence social behaviour in public space. The research of Hall presents two main influences; 'attributes of the individuals – their age, gender, cultural affiliations, past experiences, needs and expectations, emotional condition and so on – as well as the characteristics of the setting – its location, access, activities, and people in it as so on.[3]

Many kinds of research have been focused on social interaction in public spaces; some well-known researches are Jan Gehl, Jane Jacobs, Rudofsky, Anderson, Moudon, Mumford, Hall, etc. Those researches play an essential role in this research field. In this paper, two researchers are highlighted: Jan Gehl and Jane Jacobs.

Pedestrianized street - Jan Gehl

“Acceptable walking distance is a highly subjective matter. The quality of a route is just as important as its actual lengths.”

- Jan Gehl

Jane Jacobs

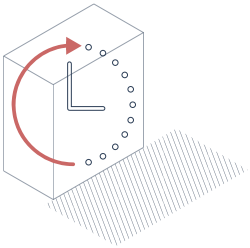
The research of Jacobs focuses on the mingling of different use and activities. The research is showing that this mingling of use and activities is important to create social value on a street. Jacobs sees the street as an important public space rather than a channel for movement.[4]

The intricate mingling of different use:

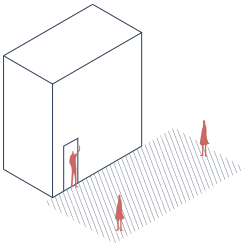
- Maintaining activities during day and night
- Safety – by the presence of people on the street
- Decreasing monotony
- Increasing public contact
- Increasing cross use

"Mingling of different use and activities creates social value to a street." - Jane Jacobs

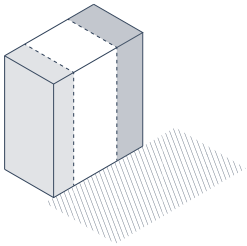
Mingling of different use — Drawing by Author



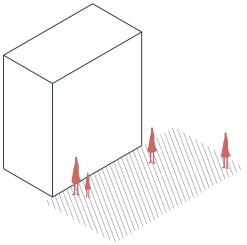
Maintaining activities during day and night



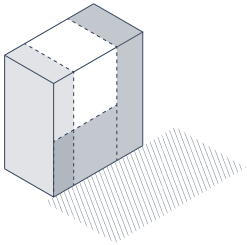
Increasing public contact



Decreasing monotony



Safety; by presence of people on the street



Increasing cross use

Jan Gehl

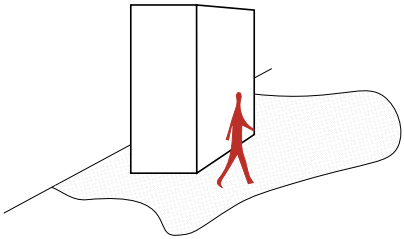
The perspective of Gehl on an ordinary street during a typical day would exist in a mixture of outdoor activities that are influenced by a certain number of conditions. Gehl simplified those outdoor activities in public space in three categories, which all require a different physical environment:[5]

- *Necessary activities* – those activities are happening under all conditions

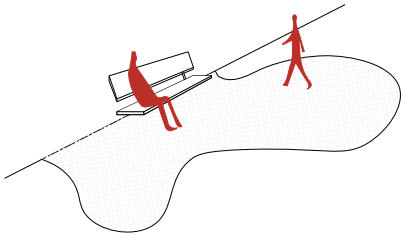
- *Optional activities* – those activities will only occur under favorable exterior conditions

- *Social activities* – those activities are closely related to optional activities

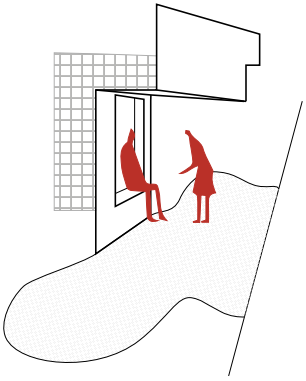
Outdoor activities in public space — Drawing by Author



Necessary activity



Optional activity



Social activity

Methodology

Parameters to research

To create a better understanding of different street typologies, parameters have been designed to measure the various aspects of the street. Those parameters are separated into three categories:

- *Physical parameters* – researching the proportion, greenery, pedestrian area, and traffic

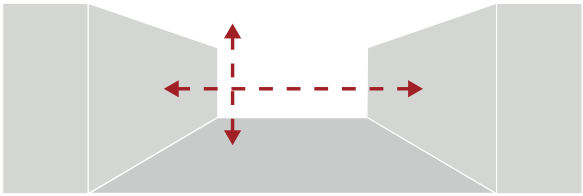
- *Interface area* – focus on the interface between the street and the function in the building

- *Social value parameters* – measures the public and private aspect of the street through the eyes of the pedestrians

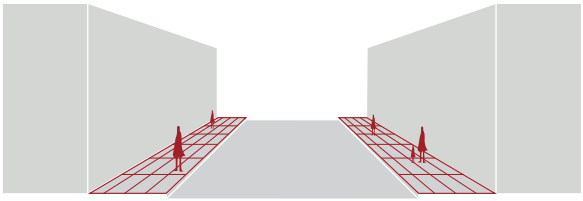
The physical parameters will create an understanding of the physical aspect of the street. Which influence has the human scale on the street, the amount of greenery that is used on the street, and the amount of space that is created for the pedestrian?
The interface research is analyzing how the area between the street and the function is related to each other, a public or private relationship between the building and the street. The amount and kind of interface play an essential role in this research. Together with the social value parameters. Which research the street from eye-level, which involves the plinth of the building together with the public space of the street from the eyes of a pedestrian. Through combining those measurements, a better understanding of the social value of the street will be created together with an overview of the elements that play an important role.

Physical parameters — Drawing by Author

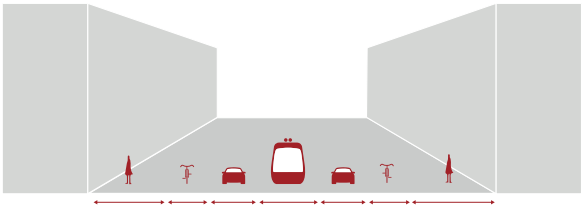
Porportions



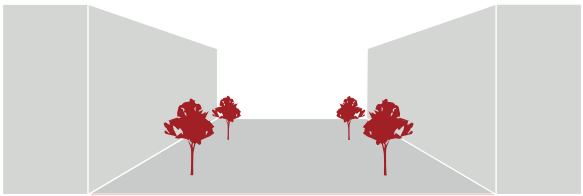
Pedestrian area



Traffic type



Greenery



Parameters of the social value

The different colors represent the social aspect of the street by categorizing them from public to private. A more dark hue of red indicates a more public area from the eyes of a pedestrain.

public

The dark red will represent the social public space that is accessible for everyone and safe to asses. It is possible for everyone to walk on this part of the street.

semi -public

The area in this color represents a semi-public space. Where pedestrians are always welcome but have a small barrier to get there.

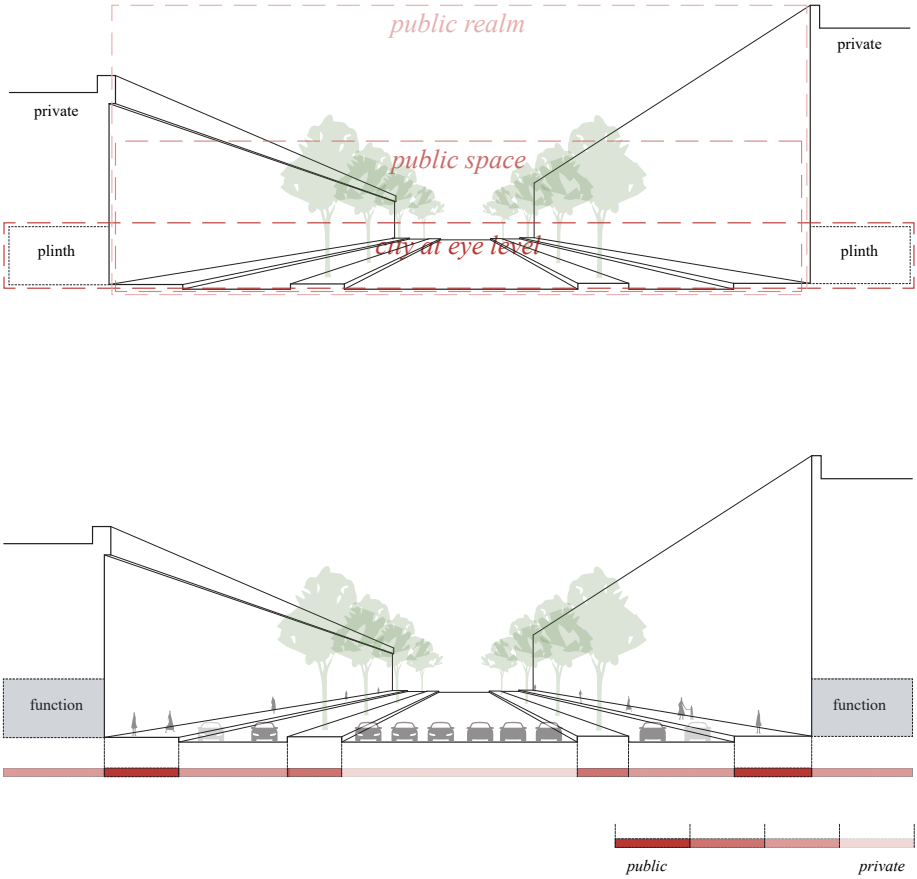
semi -private

This color represents semi-private space. This means everyone is allowed in this space, but it is an extra barrier. For example, a grocery store, which is accessible for everyone but still there is the front door's boundary to enter this shop. Besides, the building is owned by another person, which keeps it more private. There is this secondary road on the street level, where cars are only allowed to drive slow. In this way, the part of the street also stays accessible for pedestrians.

private

The private parts in the section are represented in a lighter color. On the street level, these areas mostly represent high-ways, where cars are the primary users of the area. Those areas are hard to cross as a pedestrian, even not imaging just walking on them. Also, private houses create this private part located on the street.

Social value parameters — Drawing by Author



Parameters of the interface area

The interface research analyzes how the area between the street and the function are related to each other. It is categorized into three elements:

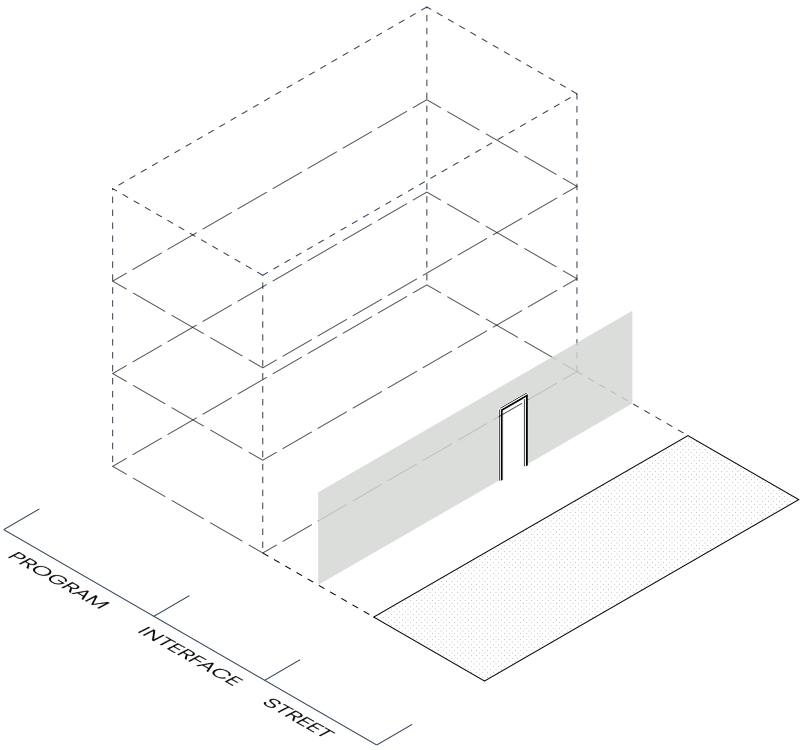
- *Street*; which represents the size and location of the street that is used by the pedestrian.

- *Interface*; represents the elements/barrier between the street and the program in the building block, which can exist of one or more components. This element creates the relationship between the program inside the building and the public space outside the street.

- *Program*; the program is representing the functions located in the building block. The different programs are categorized by color:

- Orange: Living
- Blue: Horeca
- Grey: Retail
- Green: Offices

Interface area — Drawing by Author



Street typologies and the social value

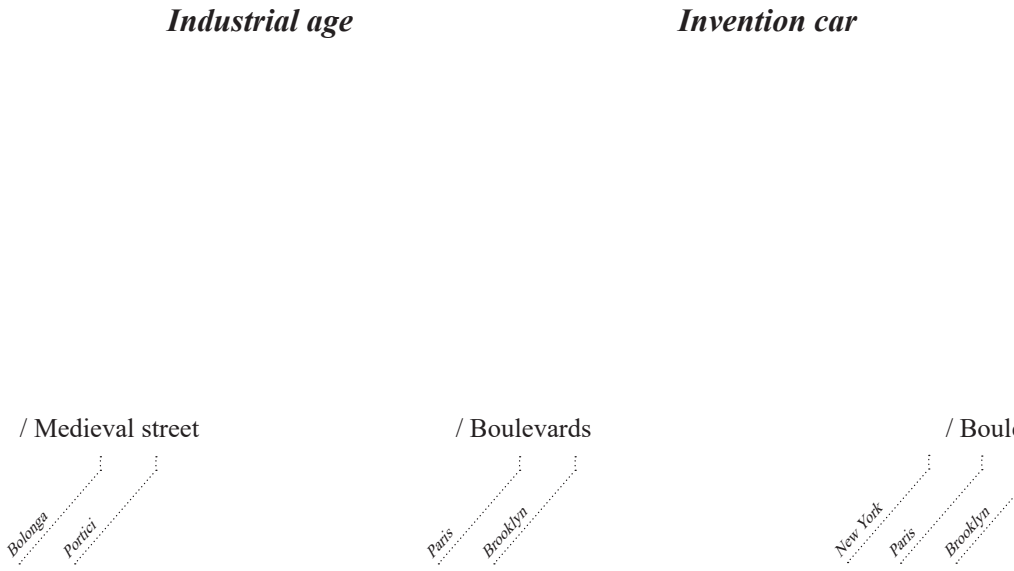
Case studies through time

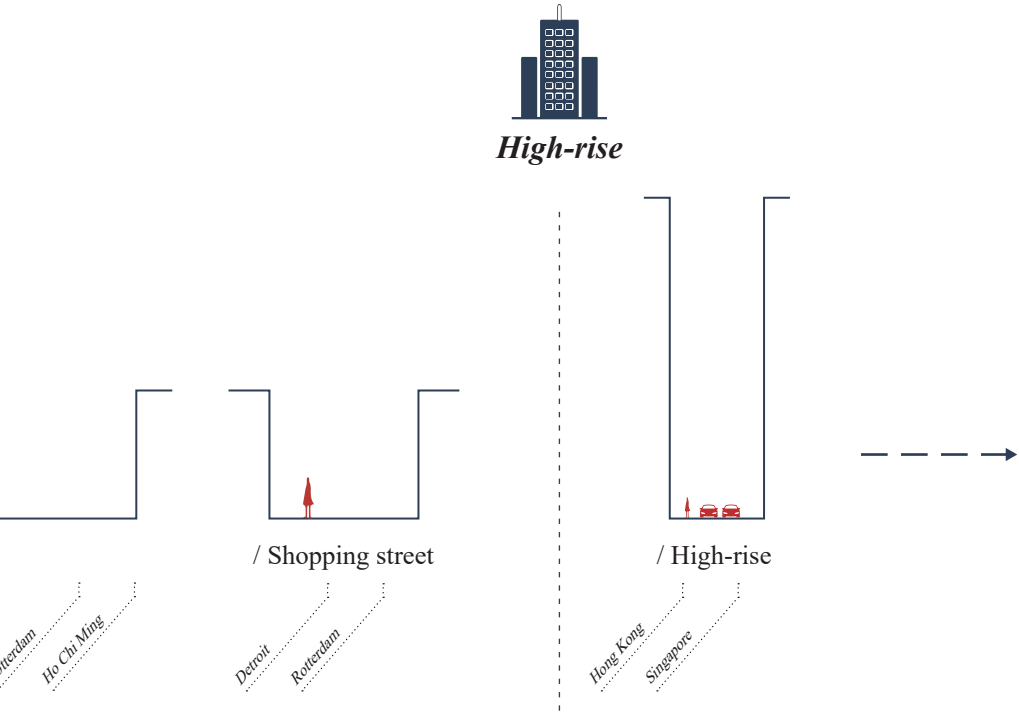
Various street typologies and the social value of different timeframes will be analyzed. By investigating multiple case studies of street typologies around the world, a better understanding will be created between the social value of the street and the typology. To develop a better understanding of the street in history and how it will change in the future.

In this research, three main events in history are captured, which had and still have a big influence on the street. Mainly through those events, the street changed from a small narrow street to a street we know nowadays. The three events are; the industrial age, the invention of the car, and the amount of high-rise in the city.

The picture of the Lijnbaan is an example of the design of a car-free street
Lijnbaan Rotterdam, The Netherlands

Time line case studies — Drawing by Author




High-rise
/ Shopping street
/ High-rise
Ho Chi Ming
Detroit
Rotterdam
Hong Kong
Singapore

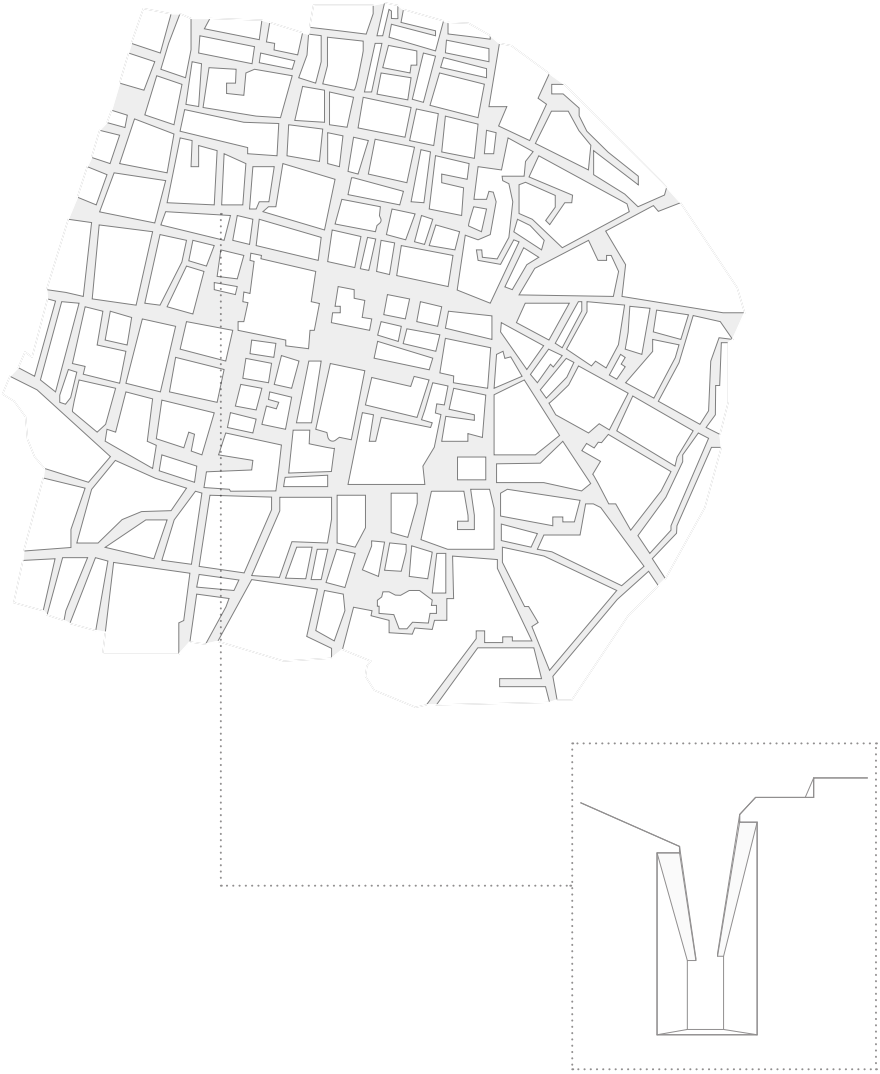
Medieval street

De medieval cities exist of small neighborhoods that are developed in their own city. The streets in the city were like a labyrinthine maze, which resulted in an ‘organic’ layout with irregular spaces and short views providing surprises.[6] These short views were useful to dislocate the ‘strangers’ in the city. Notably, the street was a place where private and public uses overlapped; this was new and unique. This mingling on the street accorded to the narrow and overcrowded buildings that were spilled out into the street and transformed it into a place of workshops, kitchens, and into a place of leisure and sociability. This mixture of functions created a kind of city into a city.[7]

Overall, the street was a space where living, working, and recreation all occur within the same space and time. The buildings were built to human scale with low floor heights connected to the narrow and small streets; the medieval street ‘has the feeling of being carved out of a slid building mass.’[8]

Medieval street Bolonga, Italy

Medieval street, Bolonga (Italy) — Drawing by Author



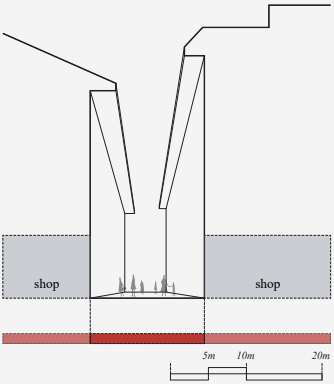
The medieval street in Bologna

Via Monte Grappa, Bologna (Italy)

The street Via Monte Grappa, located in Bologna (Italy), is analyzed as a reference for medieval times. The street is known for its narrow pedestrian street with shops as functions on the ground floor of the building.

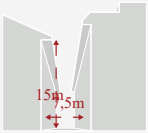
Critics give their opinion about the medieval street. This creates a better overview of the way people experience the street. The American William Dean Howells, 'I think,' he wrote, ' the whole race of arcaded cities, Treviso, Padua, and Bologna, are dull, blind, and comfortless. The effect of the buildings vaulted above the sidewalks is that of a continuous cellarway; your view of the street is constantly interrupted by the heavy brick pillars that support the arches; the arcades are not even picturesque.'[9]

Via Monte Grappa, Bologna (Italy)



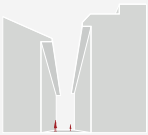
Physical parameters

Proportion



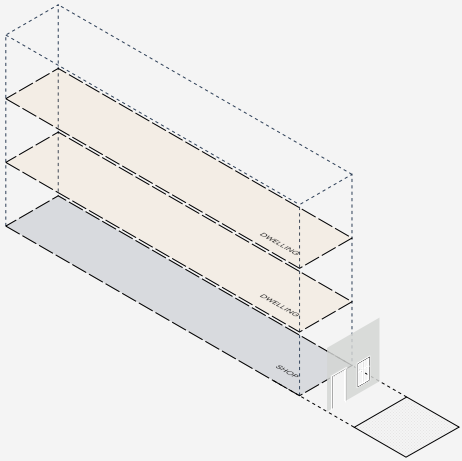
Pedestrian area

Traffic type



Greenery

Interface area



Portici in Bologna

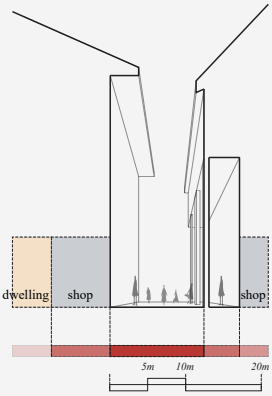
Via Monte Grappa, Bologna (Italy)

In the thirteenth century, portici was created in the street. The existence of the portici is related to the University of Bologna. Before the university owned his buildings or property, professors taught the students from their own homes or rented rooms. So the street was the connection between the different professors of the university. When the number of students studying at the university reached the number of nearly ten thousand students, the government decided to provide a continuous roof for the pedestrians, which was a portico attracted to every house.[10] This made it possible to walk around the city from 'classroom' to 'classroom' without being vulnerable to the weather.

The France philosopher Montaigne, enormously admired Bologna, loved to walk through the town for hours. He explained the portici as 'broad and handsome colonnades.' Another Frenchman called De Brosses visited Bologna in 1739 and liked the cohesion and uniformity the colonnades lent to the street: 'the portici', he wrote, ' is very large, paved with brick, and allow twelve people in a row to walk comfortably undercover.'[11] An Englishman, wrote in 1714: 'There are porches or piazzas, almost throughout the city, which are very convenient to shelter people from rain, but otherwise make the street narrow and dark.'[12]

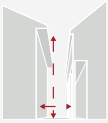
Analyses streettypology — Drawing by Author

Via Monte Grappa, Bologna (Italy)



Physical parameters

Proportion

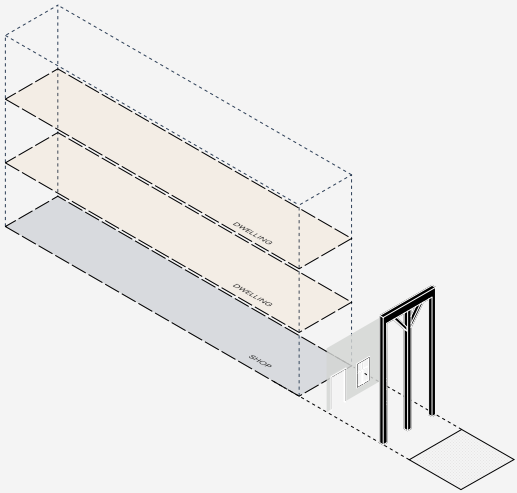


Pedestrian area

Traffic type

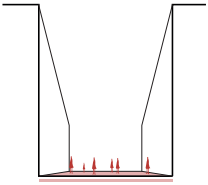
Greenery

Interface area

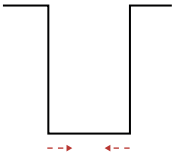


Character medieval street

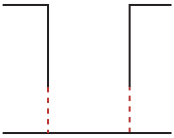
The character of the medieval street is a narrow pedestrian street. The boundary between the street and the function of the building is open, which means that the street did not stop at the façade of the building. The inside of the buildings can be seen as part of the street. Most of the activities are necessary activities, but mostly all the activities flew into each other. Like Jackson is saying, the street was a city in a city, where a lot of different activities happened.



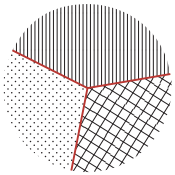
100 % pedestrian area



narrow streets



soft bounderies inside/outside

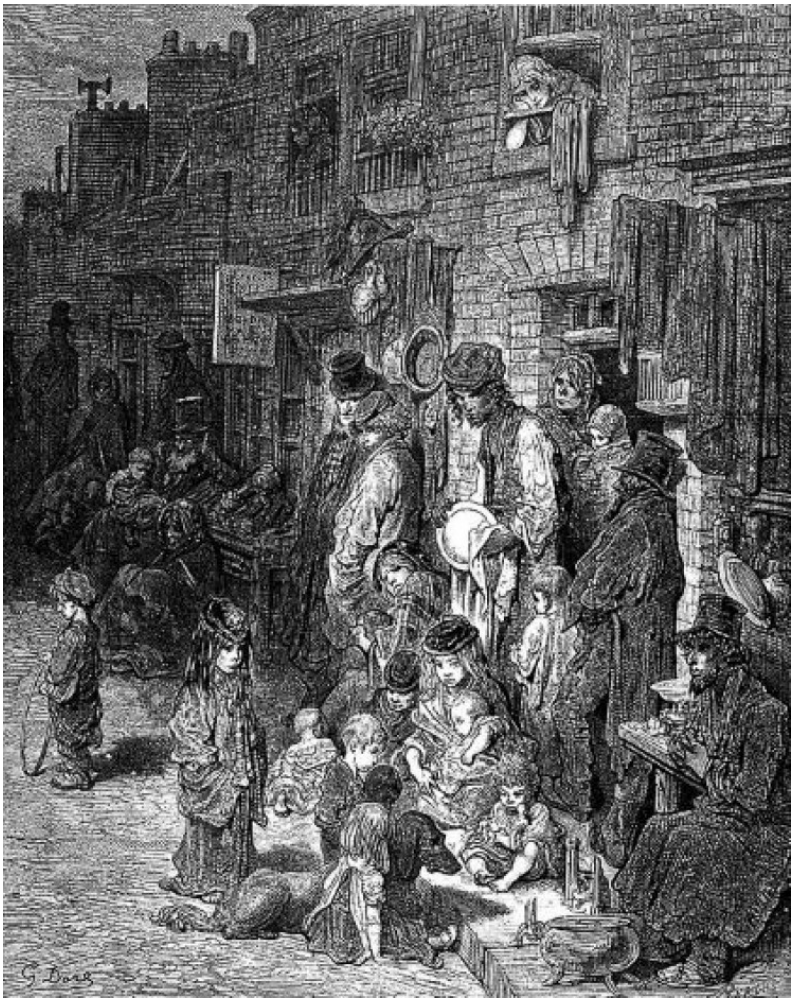


necessary activities
- *optional activities*
- *social activities*

Industrial age

Boulevards

During the industrial age, a large number of people shifted from the urban-rural areas into the cities to work in the new factories. The number of people living in the city grew exponentially, and at the beginning of the twentieth century, the major cities could not handle the exploding population growth. The population of New York grew approximately from eighty thousand to nearly three and a half million. During the same period, the number of people in the urban area of Paris grew from over half a million to almost three million.[13] Through this overpopulation in the city, the amount of social and physical illness was rapidly growing. People start blaming the dark and airless streets. Social reformers and urbanists sought the solutions to these physical, social, and even moral ills in making the city more hygienic by introducing nature – open green space, sunlight, and fresh air – into the city.[14] This is one of the reasons for the design of the boulevards in Paris by Hausmann.



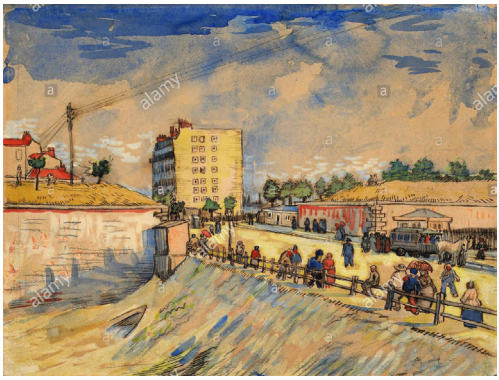
The picture is showing how the people where living in the streets during the industrial age
Paris, France

The design behind the boulevards - Ramparts

The boulevard is often related to the transformation of Paris designed by Hausmann in the mid-nineteenth-century. These boulevards were cutting through the old city of Paris and extending in the new urban areas of the city, by creating wide-lined green streets. But boulevards were not something new in Europe or Paris. The boulevards of Haussmann were a modernized reinterpretation of the earlier urban street form.[15]

The France name boulevard is related to the English bulwark, which presents the guarded town walls of medieval times. In the sixteenth century, most of the European cities were enclosed with walls for defense, which existed of inner and outer earthworks, masonry walls, moats, and towers. The wide inner earthworks were a platform for the heavy weapons; this was also called the ramparts. In the seventeenth century, the defense walls got outdated, and the cities got extended beyond the walls. Tree-lined walkways were built on the rampart parts named boulevards. The first transformation of the ramparts into a public road, appeared in 1670 when Louis XIV abandoned the walls of Paris and turned them into public pleasure promenades.[16]

The ramparts already created the social use of the promenades in the seventeenth century. From the beginning on only pedestrians and pleasure vehicles were allowed on the boulevards, carts, and commercial vehicles were prohibited.[17] Later on, more traffic was permitted on the boulevards;



Painting of Van Gogh is showing the design of a Paris Rampart
Paris, France

for example, the outsides of the boulevards were for the pedestrians, while the horses could use the center of the street. But those horses needed to move at the speed of walking and should stay six feet apart from the trees to protect them. Carriages were allowed, but if they wanted to stop, they should pull over and were not allowed to bock the pedestrian flow. Pushcarts of any type were not allowed on the central road.[18] So, in those times of the early boulevards, the pedestrian could be seen as the main user of the street. Other transport was not allowed to disrupt the pedestrian access.

When the city starts growing, the areas next to the boulevards got new public functions like cafes, restaurants, and theatres, which created a pleasant ambiance. Later, also fashionable residential neighborhoods grew around the western boulevards.[19] This shows how the road can have influence on the surrounding functions and buildings.

Map of Paris, 1870 — Drawing by Author

The influence of Haussmann on the city Paris

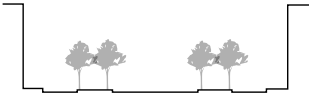
The boulevards designed by Haussmann, had a big influence on the Paris we know today. This change in Paris happened in 1852 when Napoleon III became emperor and wanted to reconstrued Paris. At that time, the center of Paris was crowded and existed of narrow streets without any greenery related to the medieval city. The reconstruction of Paris existed of four main elements; the boulevards which needed to connect the center of Paris with the suburbs, constructing underground water and sewer systems under the new streets, renovating the existing parks, and creating new public buildings and marketplaces.

Three types of boulevards, Haussmann — Drawing by Author

The nineteenth-century boulevards were part of the urban planning of the city and followed the character of the ramparts; wide-open streets, with tree lines on it, distention between the different traffic roads, and associated with pleasure and entertainment. But the purpose of the new boulevards was to open up the existing city and create a connection between the old and the new urban development. Also, the physical form of the boulevards was converted into a more modernized style. Haussmann added paved roadway surfaces and raised curbs and developed three different types of boulevards. Haussmann did not give formal names to them, but later, people gave them three different names; the center-median boulevards, the boulevard street, and the multiway boulevard.[20] The main difference between the boulevards is the number of roadways. By understanding the origin of the boulevard, it will allow us to interpret boulevards around the world.

Center median boulevard

Boulevard street



Multiway boulevard

The design of the new boulevards, which generated more daylight and air in the streets, together with the freshwater and sewing system, improved public hygiene in the city.[21] The design of the boulevards is not only enhanced the social aspect of the city by creating more greenery and public areas but also improved the general health of the people.

With the new boulevards, the social and architectural structure of the city changed. The apartment buildings connected to the boulevard were regulated to six-story height, with uniform facades, and cafes and restaurants would occupy their ground floors. The people sauntered through those streets to eat and drink. At night the brightly lit wide, tree-lined sidewalks were filled with a constant parade of people.[22] Besides this, the boulevards were also connecting different public functions of the city with each other. So united the now called boulevard Avenue Foch the monument Arc de Triomphe with the newly designed park located at the border of the city. This shows how urban architecture can influence the use of the public areas.

In seventeen years, six hundred thousand trees were planted, and tow thousand hectares of parks and green spaces were created in Paris. These parks established public space for both the rich and the poor.[22]

The painting of Pissarro represent the use of the boulevards in 1897
Paris, France

The boulevard in Paris

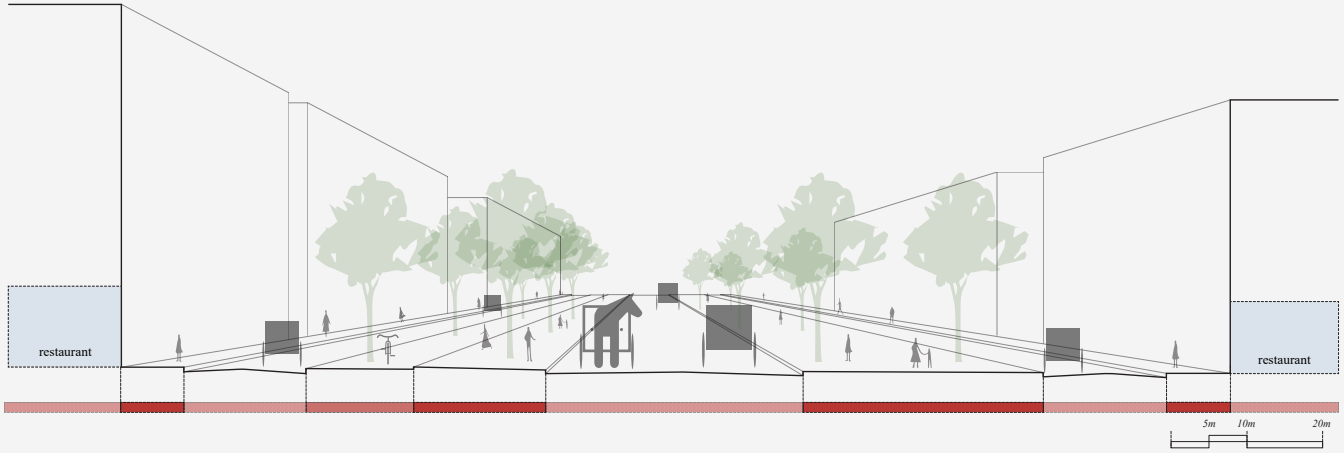
Avenue de la Grand Armée, Paris (France)

Boulevards played and still play a significant role in Paris. The Avenue de la Grand Armée is analyzed to create a better understanding of how Haussmann designed certain boulevards in Paris. This boulevard can be seen as a multiway boulevard, which exists on one main road and two side streets.

Some critics have argued that many boulevards were deliberately cut through the working-class district to break up and encircle areas of political resistance. Arguing that the streets weren't created for the people but to control the people. On the other side, Marshall Berman calls the boulevards 'the most spectacular urban innovation of the nineteenth century, and the decisive breakthrough in the modernization of the traditional city' because they 'opened up the whole of the city, for the first time in its history, to all its inhabitants.' He extends his argument that the boulevards created a new economic, social, and aesthetic bases for bringing enormous numbers of people together.[23]

Analyses streettypology — Drawing by Author

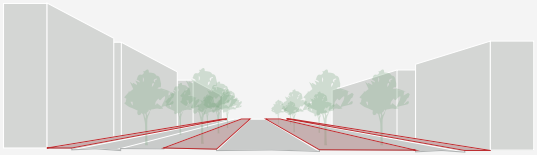
Avenue de la Grand Armée, Paris (France)



Physical parameters

Proportion

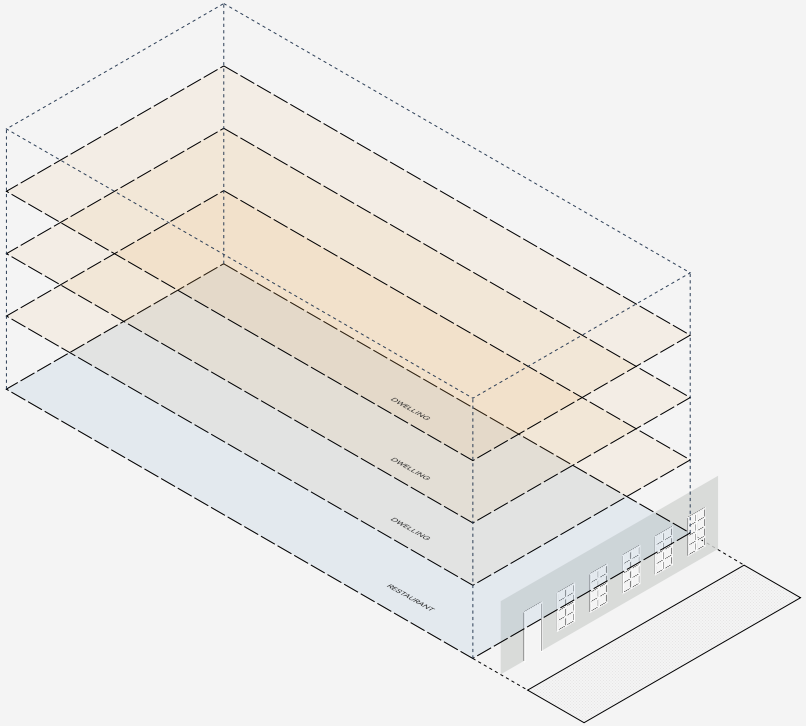
Pedestrian area

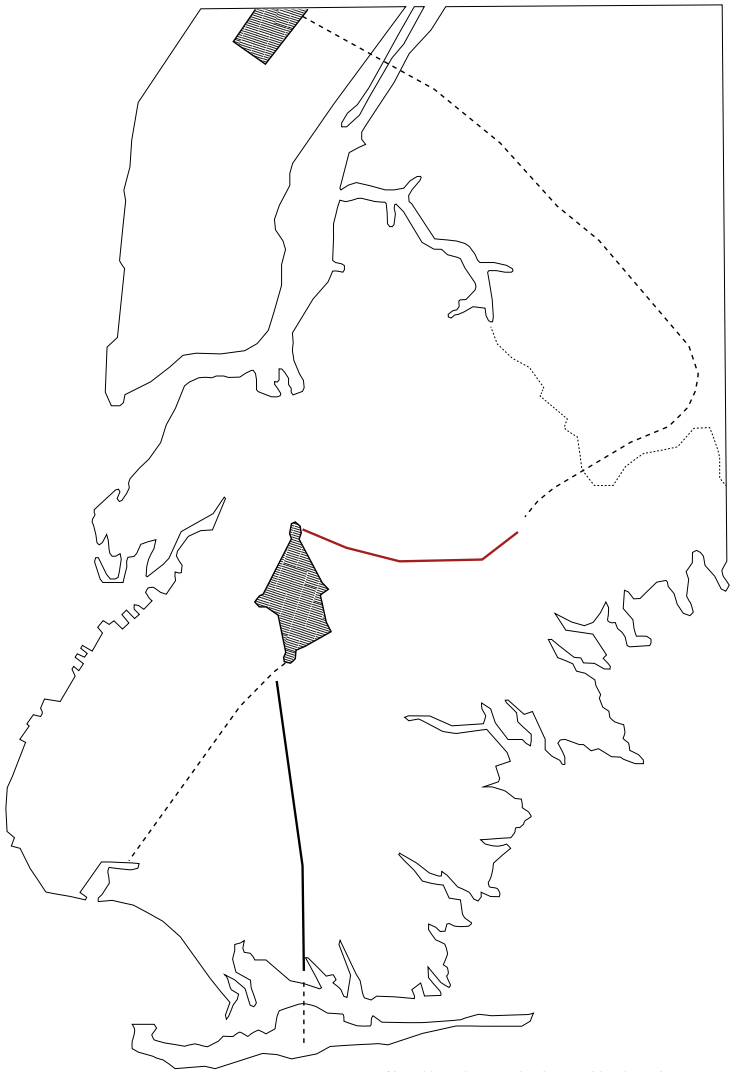


Traffic type

Greenery

Interface area





Map of brooklyn, showing the designed boulevards

Later, boulevards were also migrated to major cities in Europe, the United States in the early 1900s, and to Asia, India, and Central and South America into the 1940s[24]. In the case studies, different countries will be used, to evaluate the different use of the boulevards around the world, and to see how the street typology of the boulevard changes.

Migration of the boulevard

Brooklyn was the first city in the United States that build a system of multiway boulevards. By 1860, Brooklyn was the third-largest city in the United States – after New York and Philadelphia. The city existed in a grid structure which was created in 1839. This grid created a functional and pragmatic city center.[25] A few years later, in 1860, the government decided to build a large public park, which would be similar to Central Park in Manhattan. Olmsted, Vaux, and the company were appointed to this development in 1865. Frederick Law Olmsted was a landscape architect who also designed Central Park in Manhattan. The park they created was called Prospect Park and was supposed to become the centerpiece of the city of Brooklyn, which would also include a number of multiway boulevards, which were called parkways by Olmsted and Vaux.

The vision of Olmsted and Vaux about Prospect Park also directly included the boulevards as entrances to the park. They

saw the boulevards on a scale that was not existing yet – far more extensive than those created for Paris and Barcelona. Their parkways plan proposed an extensive system of parkways weaving through Brooklyn and extending all the way to the countryside. This system of parkways would connect Prospect Park with Central Park and other parks that were not build yet. Overall, their proposed method of parkways covered an area of more than eighty square miles.[26]

Olmsted and Vaux described the parkway system as ‘‘a series of ways designed with the express reference to the pleasure with which they may be used for walking, riding, and the driving of carriages; for rest, recreation, refreshment, and social intercourse.’’[27]

The European boulevards influenced the parkway designed by Olmsted and Vaux. However, they wanted to create less urban boulevards like the European ones but a more parklike and suburban boulevard.[28] This is visible in the section.

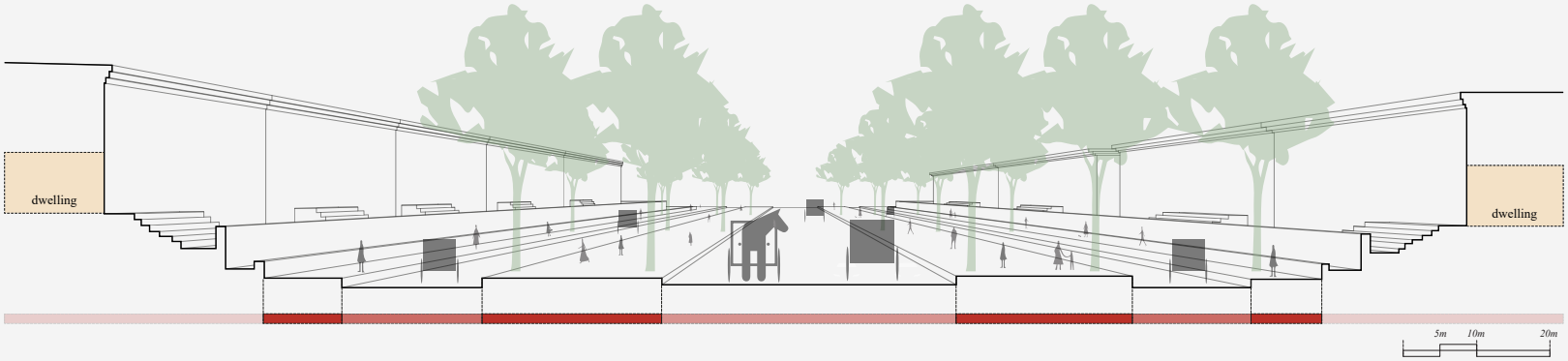
Migration of the boulevard

Eastern Parkway, Brooklyn (America)

The parkway vision of Olmsted and Vaux got never built. Only two parkways, Eastern Parkway and Ocean Parkway got constructed between 1870 and 1987. The Ocean Parkway was a connection between the Prospect Park and the beaches of Coney Island. The Eastern Parkway, the one that is used for the case study, was designed as the northern entrance to the Prospect Park, with an overall open space, and was extended two and a half miles into the city center. Both parkways were built 3 meters wider than the Avenue Grand Armée. This was a big difference with the average Brooklyn street, which was around 18 meters wide.[29] Different than the boulevards in Paris, Olmsted and Vaux visualized single-family houses on large plots next to the parkways, and a uniform building setback of 9 meters was required, filled with greenery.[30]

After Brooklyn, the parkways designed by Olmsted and Vaux also immigrated to a number of other cities in America, including Buffalo, Boston, and Louisville.[31]

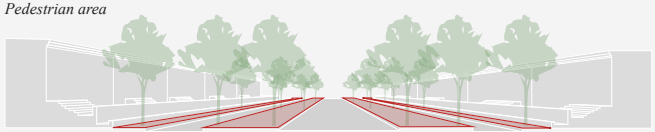
Eastern Parkway, Brooklyn (America)



Physical parameters

Proportion

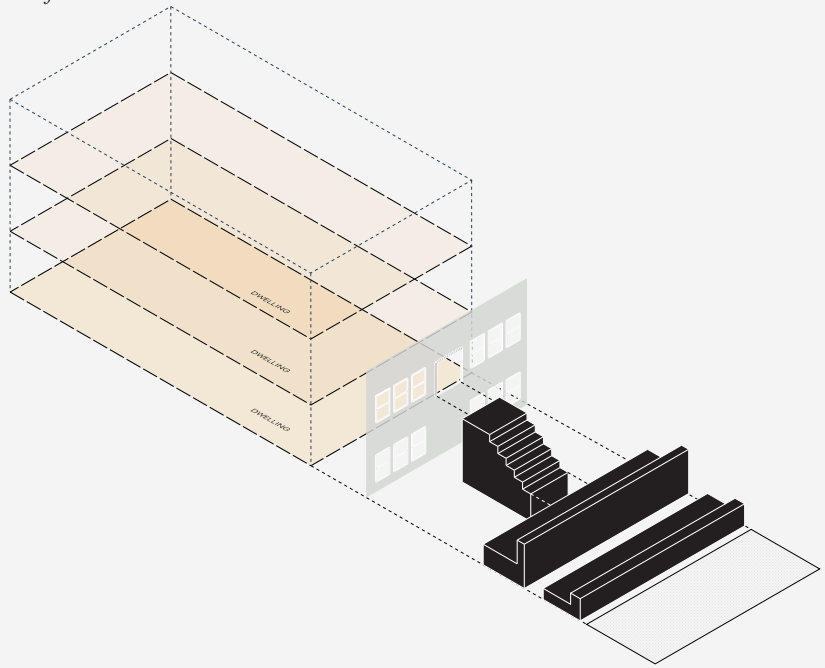
Pedestrian area



Traffic type

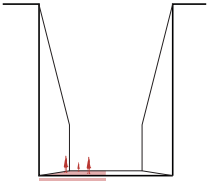
Greenery

Interface area



Character boulevards

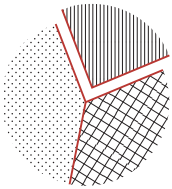
The boulevards have a wide street layout where space is created for carriages and separated areas for the pedestrian. This creates a structure on street level, but because of this structure, it is possible to have an increase of optional and social activities at the pedestrian areas. Greenery is used to increase the liveability of the street and the city.



50 % pedestrian area

greenery in the street

wide streets



increase of optional activities

part of the necessary activities got split

The influence of the car

Boulevards

Cars started to occupy the street around 1930, when American engineers began building urban highways. But also in Europe, the street was transformed from a public space of everyday use to a street that was mainly occupied by the movement of vehicles.[32] This change had an influence on the existing multiway boulevards which got reconfigured, as the central roadway was widened to create more space for the car. Towards the twentieth century, the design of the streets got more based on the ideas of separation, pedestrians and vehicles were divided from each other. Traffic movement, speed, and high volumes became the priority on the street, which did not take into consideration the slower-pace life that took place.

This change is also visible at many boulevards that were built way before the invention of the car. Also, the boulevards in Paris became car-oriented streets, where the pedestrian areas had to create a place for the vehicle.

Multiway boulevards

The multiway boulevard was the type of boulevard that was used the most during the mid- to late-nineteenth century. Because the multiway boulevard had a separate vehicle roadway which could be used for different types of vehicles, it was adaptable to the change of traffic use. In the second half of the nineteenth century, the traffic activity was changing rapidly. The amount of wheeled vehicles doubled and the carriages were improved to get faster. At the same time, the slow-moving commercial wagons made more stops, and the amount was increasing as well. However, walking was still the main mode of transportation. In the 1880s, bicycles got involved in the traffic, and 20 years later also automobiles were taking their places on the roads. The multiway boulevards were adaptable to all these different traffic transport.[33] Because of this adeptableness it is possible to explain why we can still see the structure of the multiway boulevards around the world. And it is the reason why variations of the boulevard are still made and used all around the world.

Transformation of the boulevard in Paris

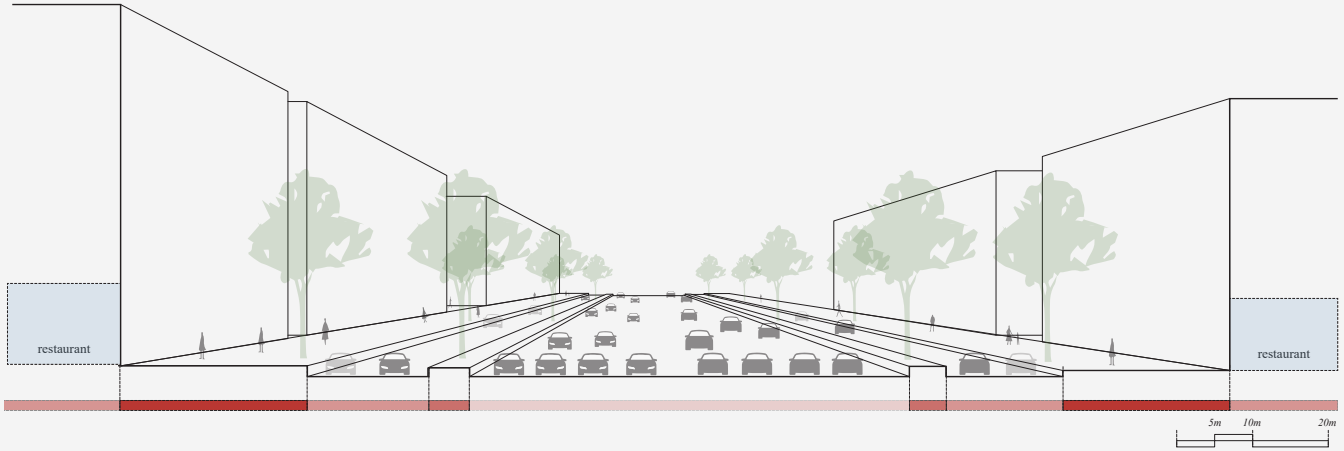
Avenue de la Grand Armée, Paris (France)

The boulevard in Paris also got through a transformation after the invention of the car. The center roadway made a place for fast automobiles in 1910.[34] The avenue was designed as a multiway boulevard, which made it easier to separate the quick and the slow traffic from each other. However, as visible in the analysis, the space for pedestrians decreased.

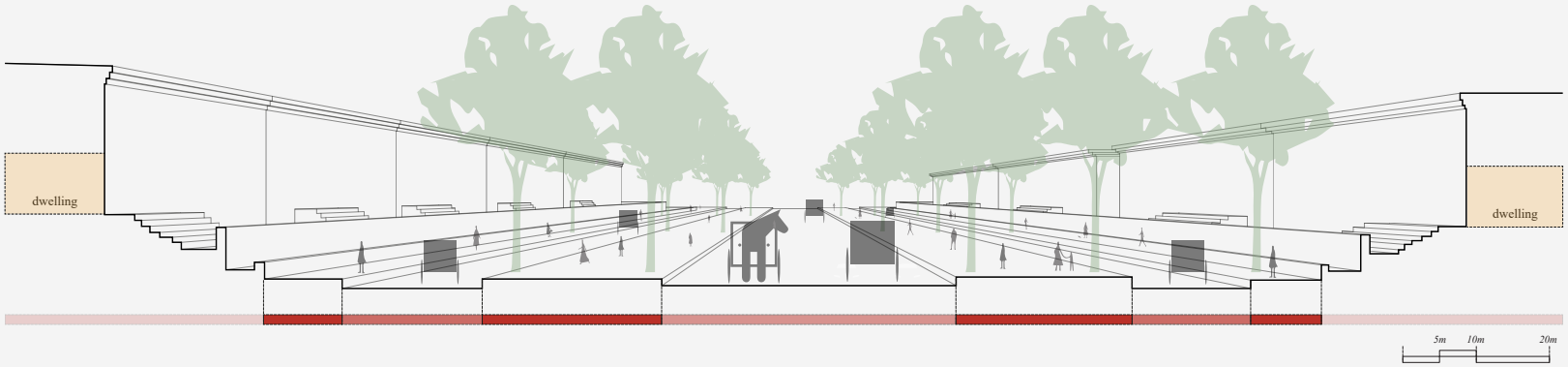
Social value analyses — Drawing by Author

Avenue de la Grand Armée, Paris (France)

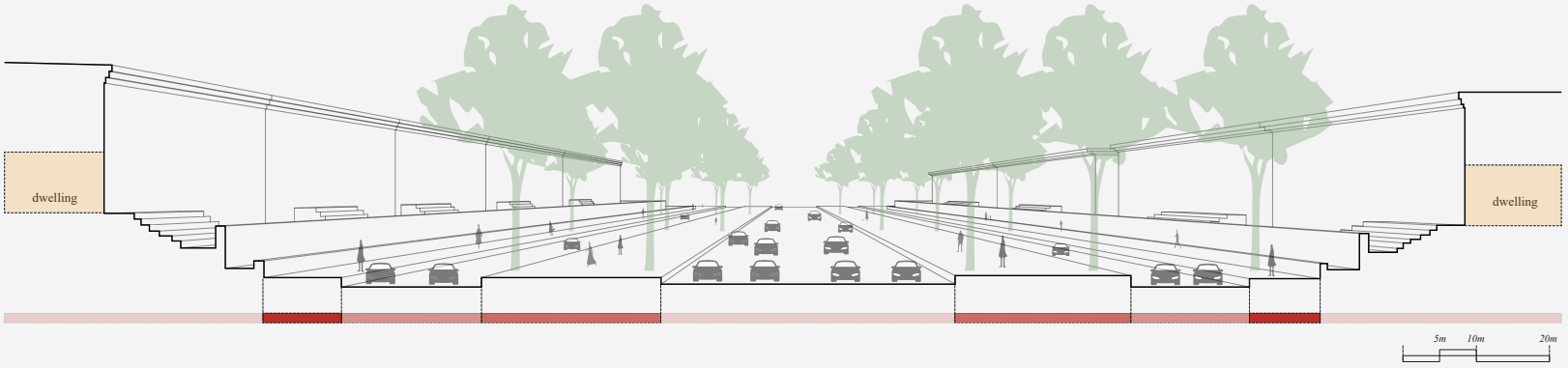
Avenue de la Grand Armée, Paris (France)



Avenue de la Grand Armée, Paris (France)



Avenue de la Grand Armée, Paris (France)



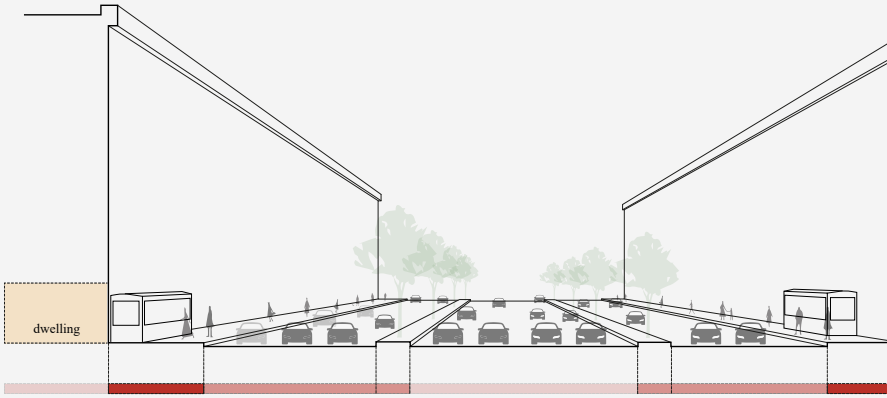
Transformation of the boulevard in Brooklyn

Eastern Parkway, Brooklyn (America)

The boulevard in Brooklyn also was transformed after the invention of the car. An interesting part of this analysis is that the amount of pedestrian space did not decrease. However, the pedestrian part between the two roads became more private.

Analyses streettypology — Drawing by Author

Grand concourse, New York (U.S.A.)



Physical parameters

Proportion

Pedestrian area

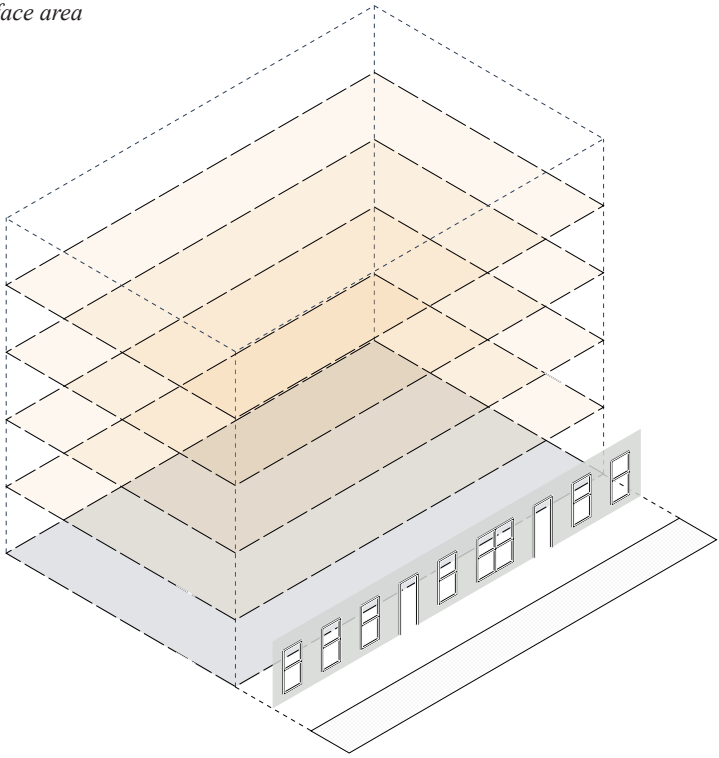
Traffic type

Greenery

dwelling

10m 20m

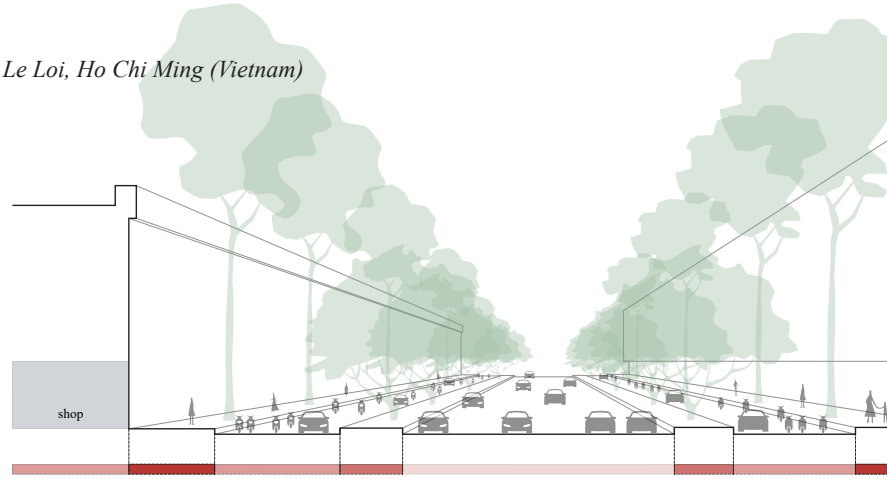
Interface area



70

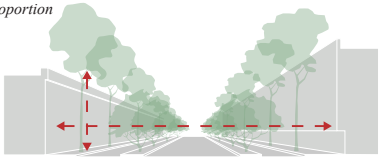
Analyses streettypology — Drawing by Author

Le Loi, Ho Chi Ming (Vietnam)



Physical parameters

Proportion

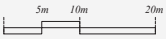


Pedestrian area

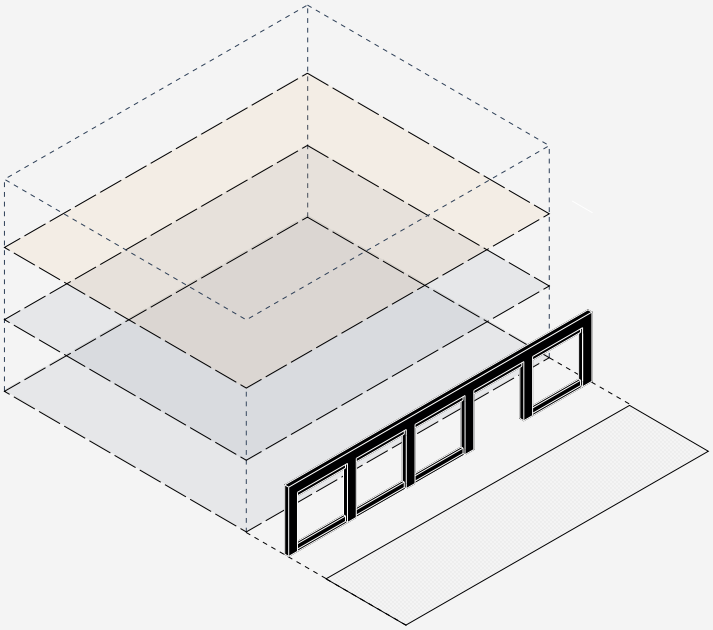
Traffic type

Greenery

shop

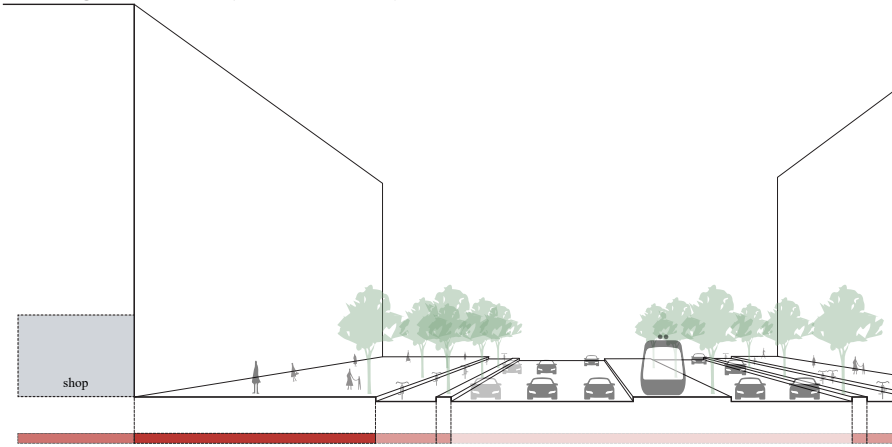


Interface area



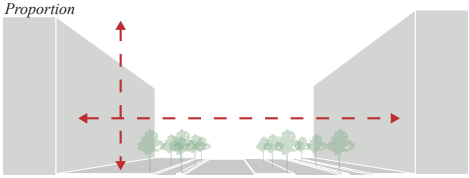
Analyses streettypology — Drawing by Author

Coolsingel, Rotterdam (The Netherlands)

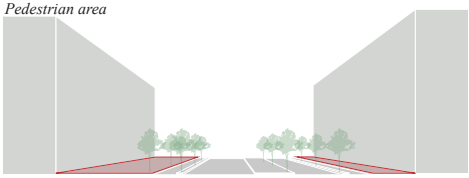


Physical parameters

Proportion

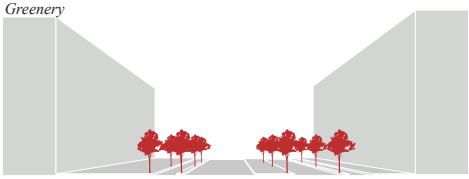


Pedestrian area



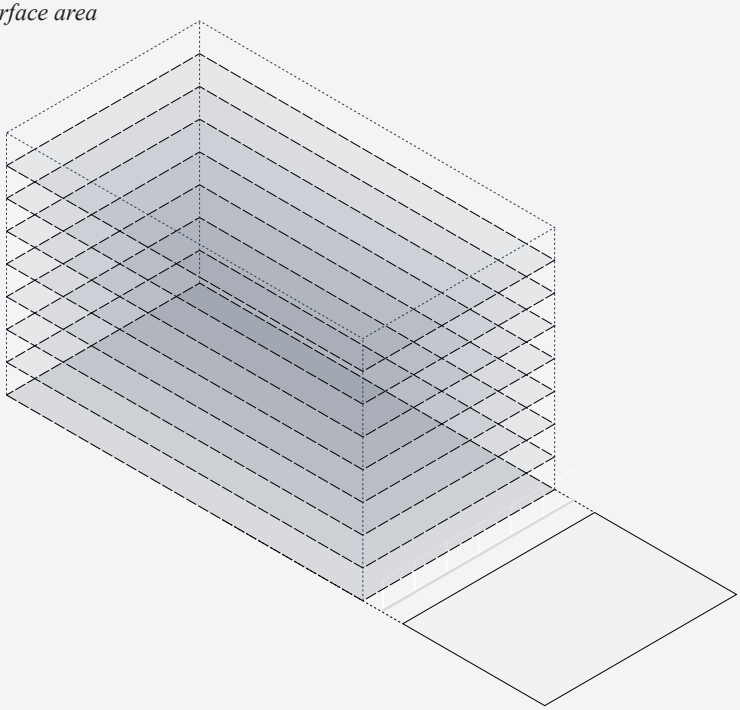
Traffic type

Greenery



shop

Interface area

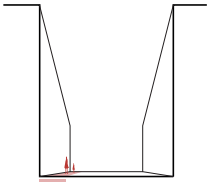


“The street is an important public space rather than a channel for movement.”

- Jane Jacobs

Character car-oriented boulevards

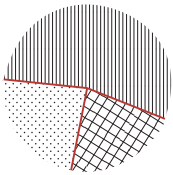
The amount of space for the pedestrian decreased enormously. Pedestrian areas got replaces for roadways, and the amount of optional and social activities decreased. The greenery, which was before to create a more liveable street, was now used as a boundary between the fast-moving vehicles and the slow-moving pedestrian.



20 % pedestrian area

Greenery as border

wide streets for cars



increase of necessary activity

From car-oriented streets to pedestrian shopping streets

As a reaction to the car-oriented streets, pedestrian-oriented shopping streets were created. The first idea of the shopping streets was designed by Victor Gruen and located in Detroit in the United States of America. The shopping street was called the Northland Centre. The concept behind the design was to create an open-air pedestrian mall. The architect focused on the relationship between the shopping mall and the residents. Van den Broek, the architect of the Lijnbaan, was influenced by the American concept of the pedestrian shopping mall and brought the idea to the Netherlands. One of the rules that were created by the architect was that all the shop windows needed to be fully glazed, to encourage the relationship between the street and the shops inside.

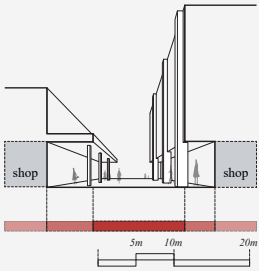
The picture is taken at The Northlander shopping Center, which was a car-free shoppingstreet Detroit, United States of America

First pedestrian shopping street

The Northlander Shopping Center, Detroit (U.S.A)

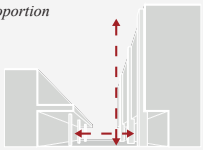
The new design of the shopping street came from the Vietnamese Victor Gruan, who immigrated to the United States of America. He designed a unique shopping concept for the city of New York and Los Angeles in 1943. Ten years later, his first pedestrian shopping mall, the Northland Shopping Center, was built. He wanted to create a relationship between the shopping mall and the residents.

The Northlander Shopping Center, Detroit (U.S.A.)

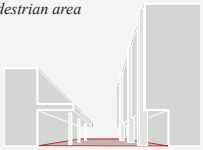


Physical parameters

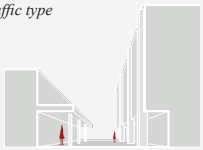
Proportion



Pedestrian area

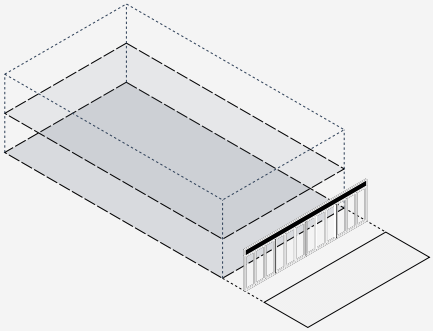


Traffic type



Greenery

Interface area



Migration of the pedestrian shopping street

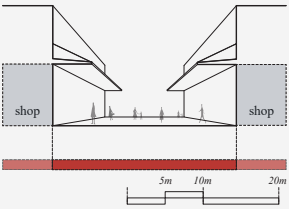
The Lijnbaan, Rotterdam (The Netherlands)

The Lijnbaan, which is located in Rotterdam, is the first shopping street in the Netherland. Pedestrians were only allowed to enter on foot. The street played an essential role in the way the Netherlands looked at street patterns. The design was created in the post-war period of Rotterdam. Essential to its design was the facade, which needed to be as transparent as possible.

The American historian Lewis Mumford argued that ‘‘The supreme embodiment of the post-war triumph was the brand new Lijnbaan. Comparing it favorably with Park Avenue in New York, situate The Lijnbaan is situated in the grand tradition of historic inner-city shopping streets and nineteenth-century arcades and argued that it belonged to the high ranks.’’ Mumford praised the Lijnbaan for its intimate scale, the decision to pedestrianize the street and ban car traffic.

Analyses streettypology — Drawing by Author

The lijnbaan, Rotterdam (The Netherlands)

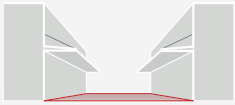


Physical parameters

Proportion

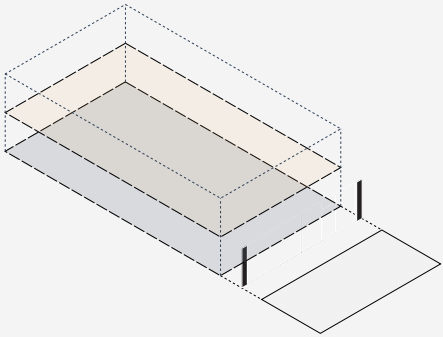
Pedestrian area

Traffic type



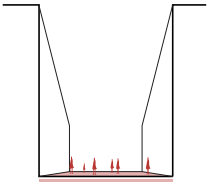
Greenery

Interface area

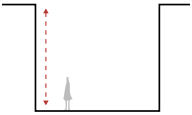


Character pedestrian shopping streets

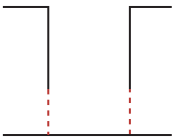
By analyzing two pedestrian shopping streets, the concept of the shopping streets becomes more visible. The pedestrian shopping street's most important element is the relation between the pedestrian and the shops (function). The connection between the pedestrian and the shop is achieved through certain design decisions, such as the amount of glass used in the façade, and the human scale of the buildings. In this street typology, the focus is mainly on optional and social activity, by creating a pleasant place for pedestrian-only.



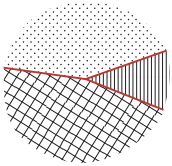
100 % pedestrian area



human scale



soft bounderies inside/outside

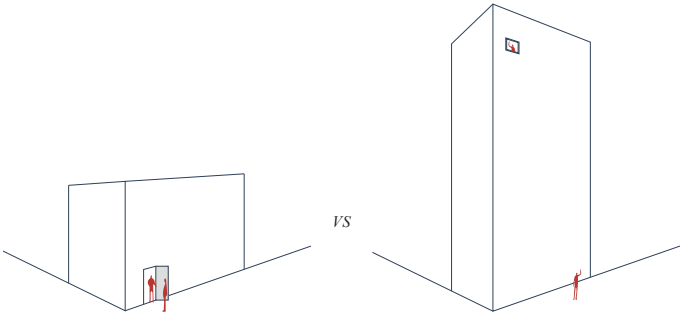


mainly optional and social activities

The connection between high-rise buildings and the street

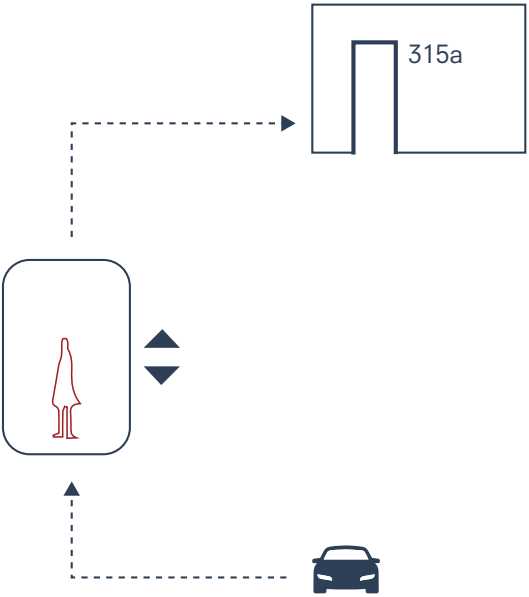
The amount of people living in cities is growing. To create more ‘space’ in the city, the number of high-rise buildings is drastically increasing.

Bernard Rudofsky calls ‘the tall buildings the pedestrian’s bane. Their acres of outer walls deflect winds downwards, multiplying their force, and make walking on the windward side a torment’.[35] Gehl’s research shows that the higher people live above ground in a residential building, the weaker the connection is with the ground environment. He notes: ‘under normal circumstances, based on the scope of a person’s field of vision, anyone living above the fifth floor cannot be associated with ground activities.’[36]



The higher the residents live above the ground, the weaker their perception of the ground environment tends to be (Gehl 1996)

Another problem with the high-rise buildings is that people start feeling more lonely because of the lack of public space were people can meet each other.[37] People are entering the building with their car, getting out in the car park, and taking the elevator to their apartment. Through this way of entering your apartment, there is little chance to meet other people.



The feeling of loneliness is a big problem in the new high-rise buildings. The amount of space were people can meet each other is minimum. (Hoogbouwvisie Rotterdam)

“Mingling of different use and activities creates social value to a street.”

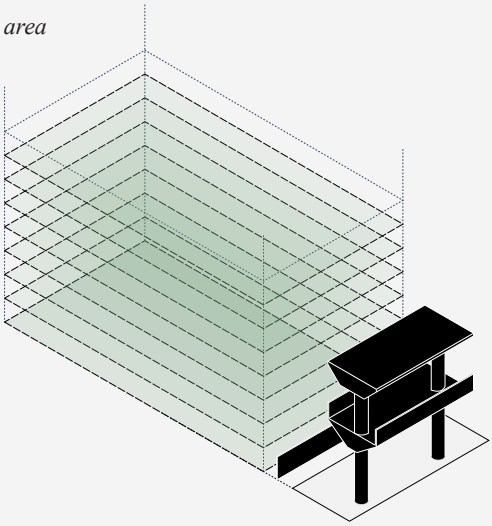
- Jane Jacobs

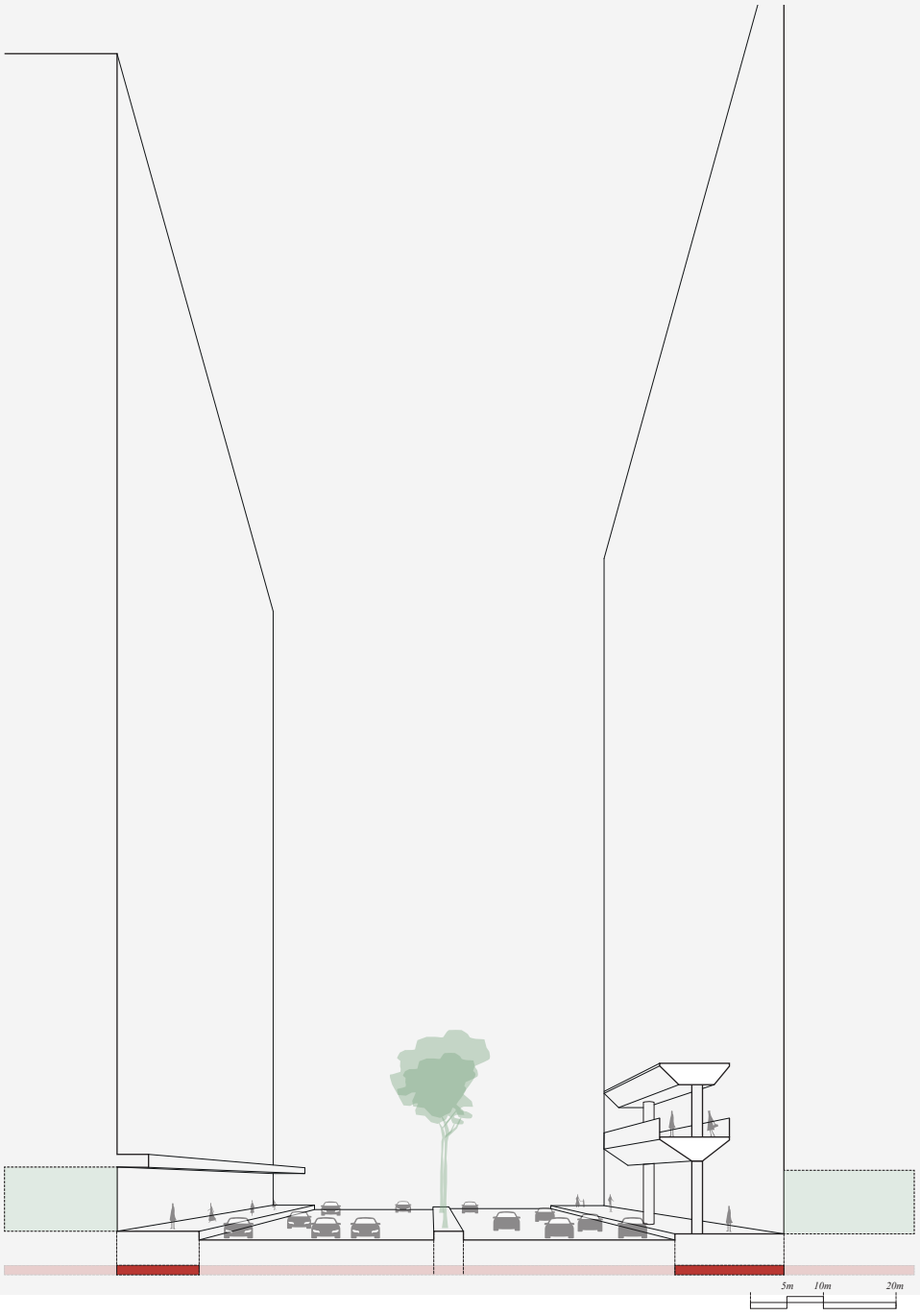
High-rise street

Connaught road, Hong Kong (Hong Kong)

The case studies exist in big cities known for their high-rise, like Hong Kong, and Singapore. Both cities are high-rise cities that can be seen as car-oriented cities. Hong Kong created its own way for pedestrians to move through the city. Separate pedestrian lanes are constructed mostly above ground level and integrated into the surrounding buildings.

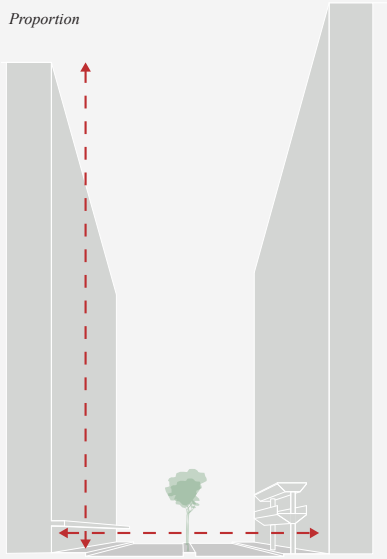
Interface area



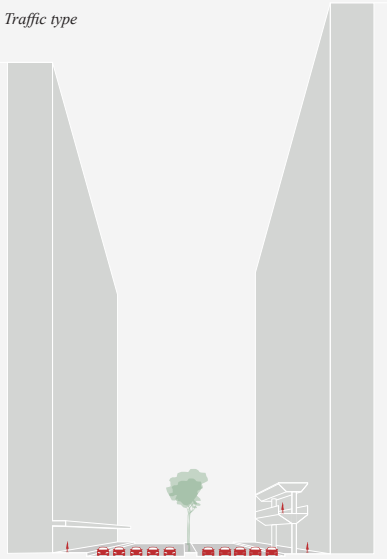


Physical parameters

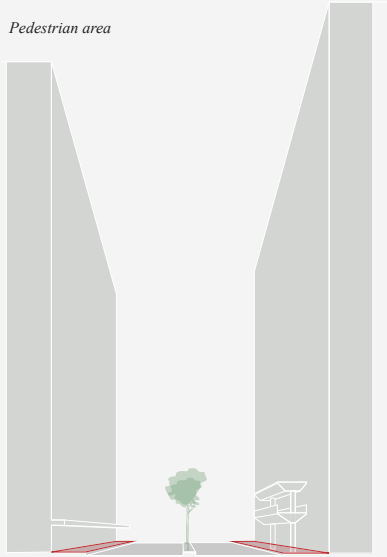
Proportion



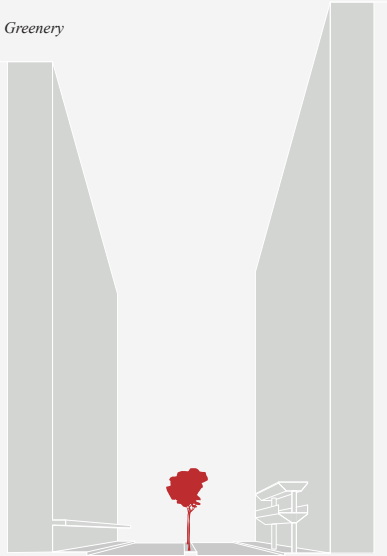
Traffic type



Pedestrian area

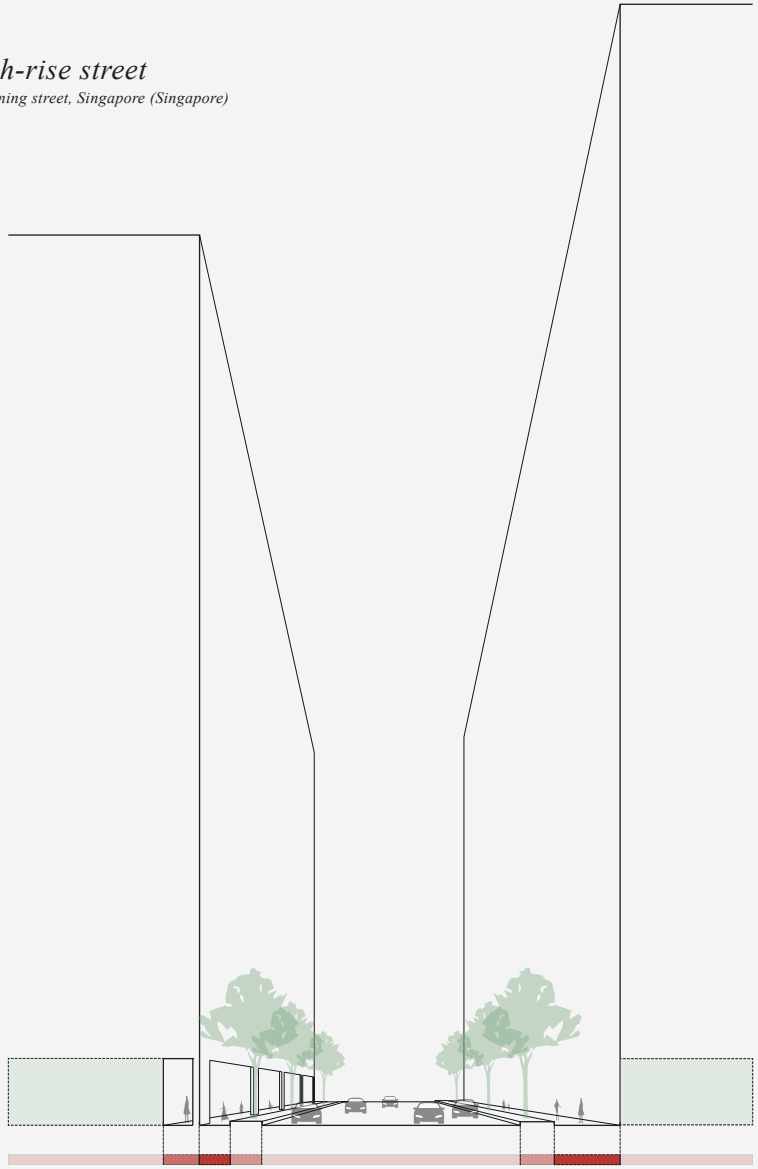


Greenery



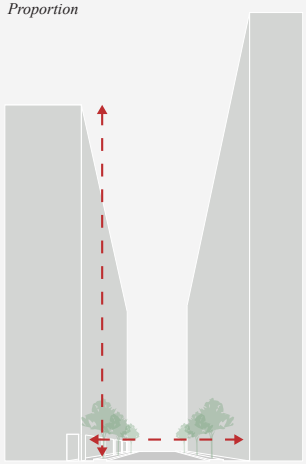
High-rise street

Pickerning street, Singapore (Singapore)



Physical parameters

Proportion

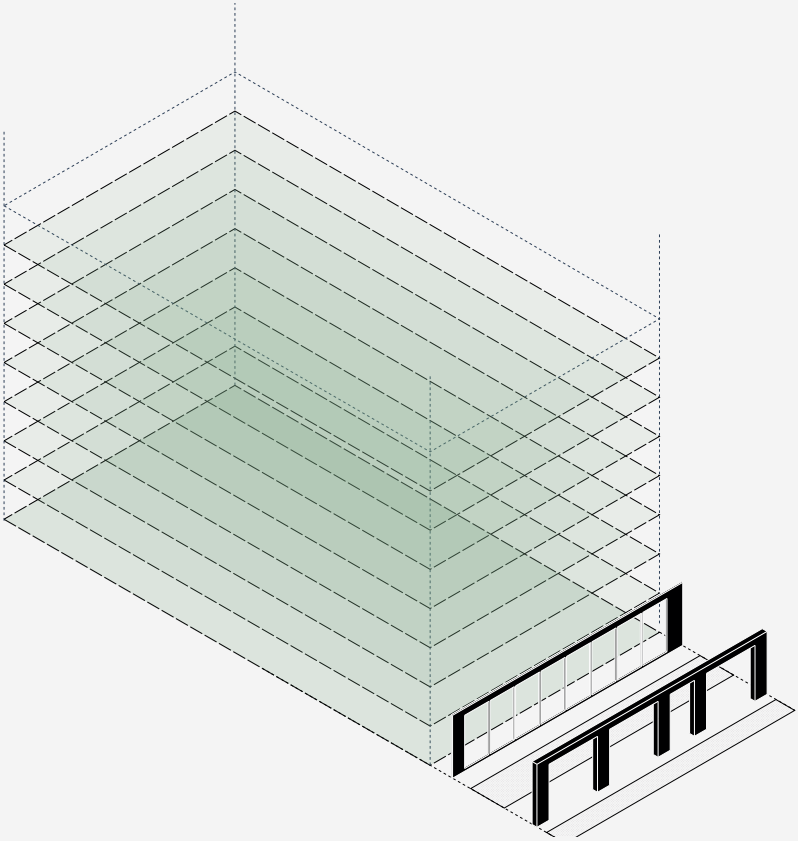


Traffic type

Pedestrian area

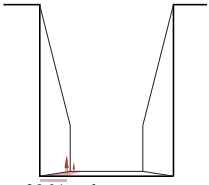
Greenery

Interface area

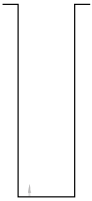


The character of streets surrounded by high-rise buildings

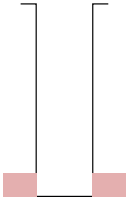
The high-rise buildings are creating a disconnection between the building and the street. Because of the height of the building, the human scale of the street is lost. Besides this, the street is mostly occupied by cars, and only a small part is left for pedestrians. The main activity of the street is necessary; there is almost no space for optional and social events. Because of this connection between the building and the street, it is extra important to create a relationship between the plinth and the street.



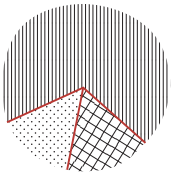
20 % pedestrian area



lack of connection between the street and the building



the plinth becomes more important



mainly necessary activities

Designing a street

To create a better understanding of the street and to prepare the guidelines, a series of various case studies have been studied. A handful of streets are analyzed from different time periods all around the world. The documentation of existing streets can provide an analytical understanding of the street. But it is not possible to generalize all the street into one general concept, because every situation is different. Designing can be seen as a trial-and-error method that is created, measuring through knowledge and experience.[38] By researching various case studies of streets, it was possible to identify issues and ways to address them in the preparation of design guidelines.

Analyzing the case studies in combination with researching the background information about the street established an understanding of the movement patterns, uses, activities, and social interactions of the street typology. The social interaction in a combination of the existence of the city streets as social milieu can both be seen as the result of everyday activities.[39]

Influence on optional and social activities

Design guidelines can provide a positive and negative influence on the social aspect of the street.

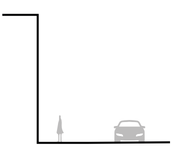
Guidelines for a positive influence on the social aspect:

- *The amount of pedestrian area*; the more space is created for the pedestrian, the more area can be used for social activities. Trees can be used to provide a distance between the pedestrian area and the road.

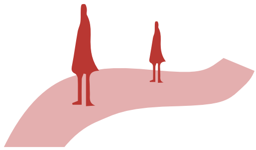
- *The soft boundary between the street and the plinth*; the interface area between the street and the function plays an essential role in the created boundary. By providing a softer boundary, the street and the plinth are almost becoming one object—an example, the boulevards in Paris played this a vital role for the design.

- *The human scale of the street and surroundings*; have a positive impact on social value, which can be created through the street's width in a relationship with the height of the buildings.

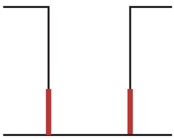
Negative influence ········> Positive influence



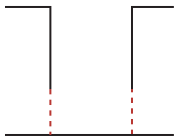
pedestrian area



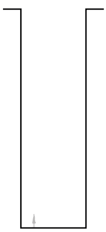
pedestrian area



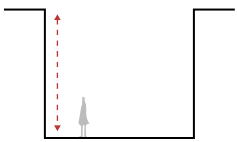
hard bounderies



soft bounderies inside/outside



/ no human scale



/ human scale

Observations that influence the street

Specific observations played an essential role in various case-studies, which could be useful to better understand before designing a street.

- *Proportions*; the human scale of the street has a significant influence on how people experience the public space.

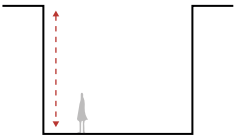
- *Connection*; the connection between the street and the plinth plays an important role.

- *Greenery*; greenery in streets can be used as a boundary between the pedestrian and the car. But space is needed to have trees as greenery in the street.

- *Pedestrian*; most of the time, the pedestrian areas are connected to the plinths, and the percentage of the pedestrian area plays an important role.

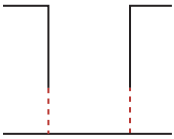
- *Traffic*; it can be seen as a boundary between the two sides of the road. Also, parked cars can already give the experience of a border. The speed of the traffic is the highest at the center of the road.

Prorportion



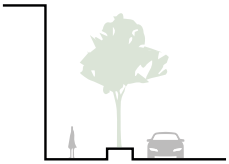
Human scale

Connection



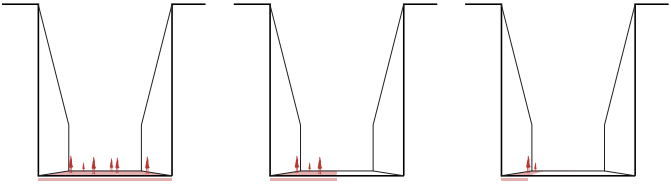
Connection facade

Green



Boundary

Pedestrian

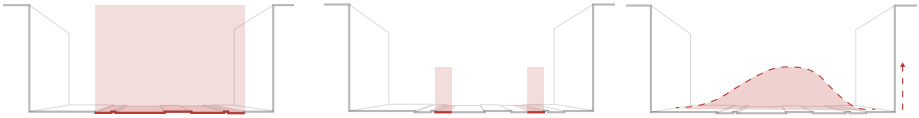


Pedestrian area

Pedestrian area

Pedestrian area

Traffic



Boundary traffic

Boundary parked cars

Traffic speed

Observations of the different interfaces

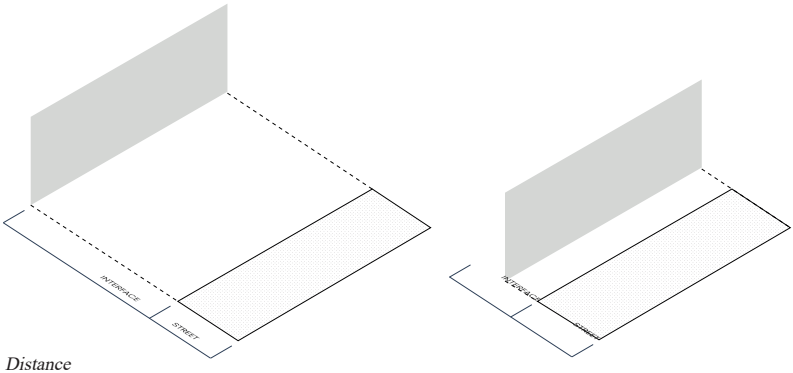
The relationship between the street and the plinth/function is related to the interface. Two aspects of the interface will be highlighted because this has a significant influence on the private and public elements of the street.
Measuring the interface:

- *Distance*; the amount of distance between the street and the function influences the privacy of the building. If the range of the interface is minimal, the building will be more public.

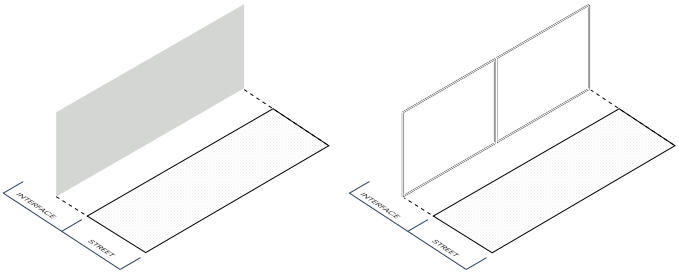
- *Openness*; the openness of the interface place an essential role in the privacy aspect of the street. The more closed the interface, the more private the building will be.

The influence of the interface is closely related to the function that is located in the building. This creates the reason for certain openness or distance.

The guidelines can be used as tools by designing a street and understanding the design process of a street. But every street and surrounding is different. It is not possible to create one consistent concept for the street. It is always essential to incorporate existing surroundings and culture.

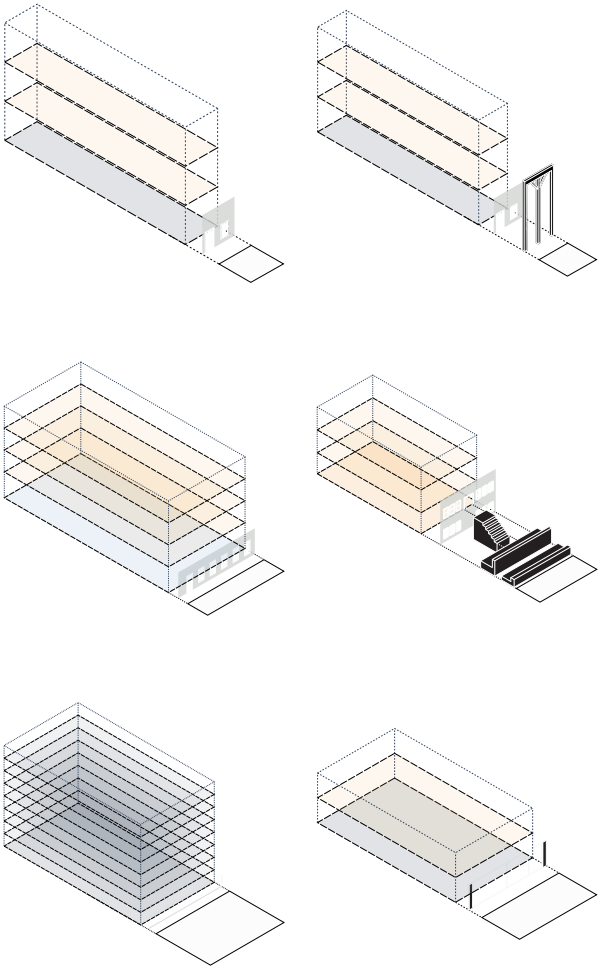


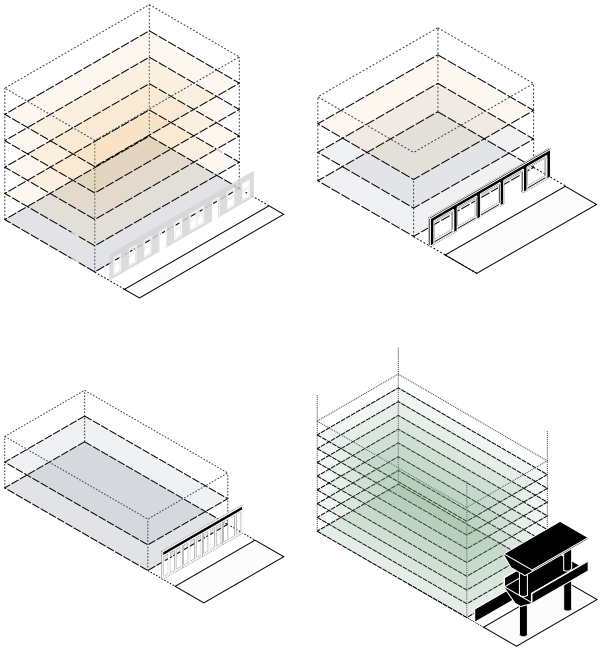
Distance



Openness

Overview of the different interfaces





Endnotes

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