Promenades from door to door

Sustaining neighbours' relationships between street and flat

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Abstract

circulation space - neighbours - promenade - threshold - appropriation

Walk to the entrance, get your keys, open the front door, come into the building. Check your mailbox, go up the stairs or take the lift, reach your apartment's door. Open it and walk into your flat. How long does this routine take per day? Quarter of an hour, three minutes or forty seconds? Really, such a short time in twenty-four hours? This large collective space, empty most of the time, looks obviously under-used! Today entrances, corridors and staircases appear as functional spaces within the housing: their only function is to provide access to apartments. Their poor design limits spontaneous appropriations: who would like to have a *fika* in a narrow and dark corridor?

This thesis investigates how a circulation space can encourage new uses, as the same time as preserving the privacy of an apartment. In sociological research, a few explorations focus on the graduation of privacy this space involves. In the urban scale, the Modern Movement and the Team X designed utopian plans where the pedestrians streets form a continuous path from the city to the dwellings. In the building scale, nine projects are chosen to highlight the transition from the public to the privacy throught three key issues: the vertical connection, the horizontal connection, and the spatiality of the circulation space. This research is implemented in a real scale project in Linköping: the conception of an apartment building explores flows and furniture of the circulation space.

Today, the issue of sustainable development is raising the questions of flexibility, temporality and sociability. This "in-between" place has the potentiality of being appropriated by the neighbours as a meeting place. The circulation space appears like a tree trunk which sustains the leafs, the home. The more suitable and welcoming its spatial form is, the more sociable the neighbours might become with each other.

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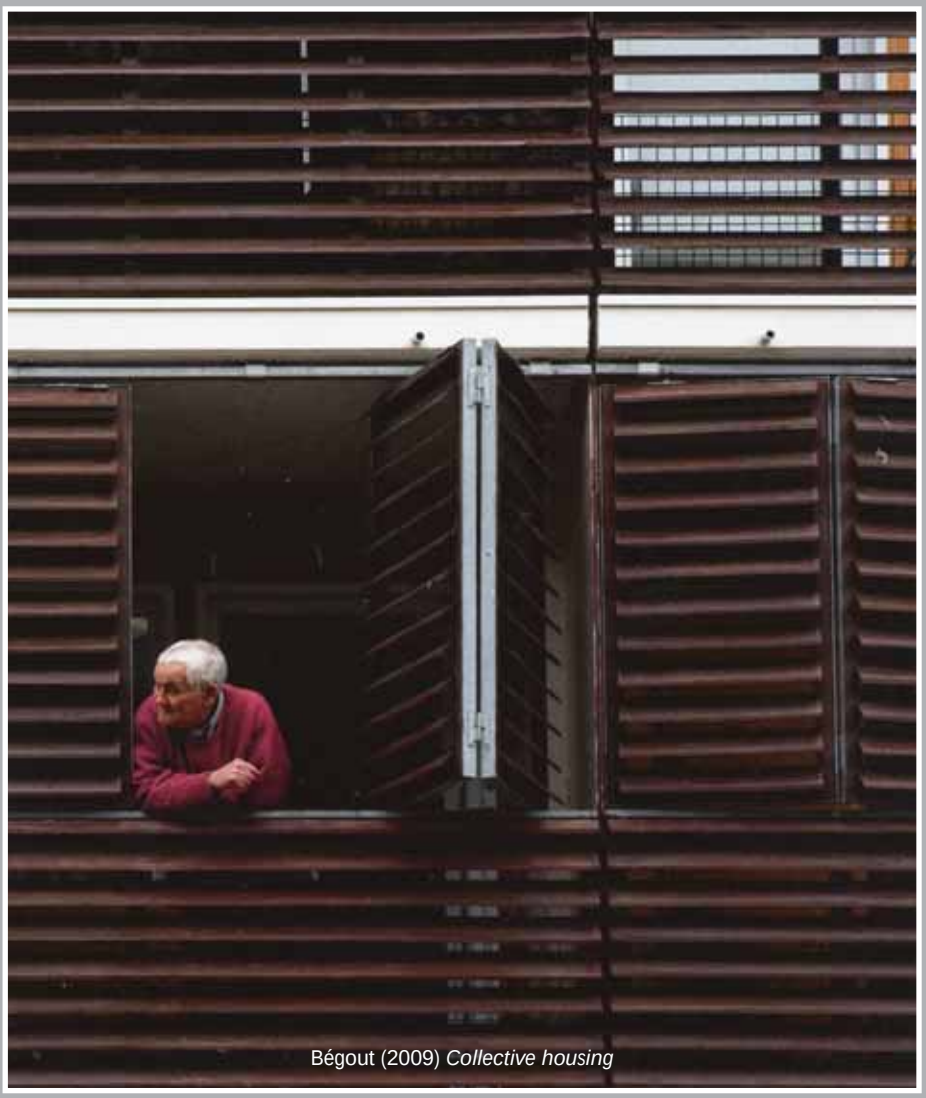
I. Introduction



Bégout (2009) *Collective housing*

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In 1899, Picot stated:
"the plans [of housing] have to be designed to avoid the inhabitants' meeting. Landings and staircases have to be considered as the extension of the public street"

Moley (2003: 21)

Proximity:	nearness in space, time, or relationship
Housing:	houses and flats considered collectively
Apartment building:	a large building divided into separate apartments
Circulation:	movement to and from or around something, especially that of fluid in a closed system
Neighbour:	- a person living next door to or very near to the speaker - a person or place in relation to others next or near to it - any person in need of one's help or kindness (after biblical use)
Walk:	moving at a regular pace with a certain direction in mind
Promenade:	a leisurely walk without destination, taken in a public place so as to meet or be seen by others
Federative:	form into a single centralized unit, within which each state or organization keeps some internal autonomy (Oxford Dictionaries, 2013)

I. 1 First form of a circulation space in a neighbourhood

Collective housing is a modern form of habitat. It became democratic to live in a flat after the fifties, when a mass industrialisation produced thousands of apartment buildings. But this collective way of living is based on an older principle, raised in the XIXth century. The working-class neighbourhoods were the first form of "live together". Around their factories, the leaders created new housing districts for the workers. In order to attract their employees in these townhouses, the area was designed as a fancy countryside neighbourhood. But this one was very confined: the gate to get into the district was controlled by a guard and the plan did not include meeting places (Moley, 2003). The circulation space of this neighbourhood was considered as a social danger for the leaders. Before the public health precepts in the early fifties, this "in-between" place was often described as a dark, insecure and sinister place.

In 1909, Kellog was among the first ones to define what a neighbourhood is: "an intermediate group between the family and the city, in opposition to the organisations with specific goals" (translated from Moley, 2003: 49). He underlined the spontaneity of such a community and its non-profit-making. Then neighbours gather between the very private sphere (the home) and the public one (the street, the city). In 2000, Barton described it as a familiar territory delimited by the appropriations of the inhabitants. These ones define unconsciously the borders of their neighbourhood and who it includes: the residents of a building, people living in the next buildings or people of a district (Barton, 2000). This thesis focuses on neighbours defined as the inhabitants who live in the same building and share memories of this place.

I. 2 Architectural promenade

The acceleration of speed, the diversity of rhythms, temporalities and mobilities are the new features of modern society. The spatial limits are overstepped with the internet, facebook, smart phones, etc. The present cities are divided into mono-functional districts (places where we sleep, work, shop, etc), designed as if they were used only few hours a day (for instance business districts are mainly alive from nine to five o'clock). Finally this situation produces empty and inactive areas. In the motion of the city, the inhabitants are walking (sometimes running) having in mind a specific destination. They go from one place to another one taking the shortest way. This principle also applies within housing where "spaces have been arranged to save time" (Rebois, 2011: 8). The circulation space is a place where the neighbours go fast, anonymously and do not take the time to stand around. It can also be considered as an inactive and sleeping space since the inhabitants use it only a few minutes per day.

What about slowing down the speed? Could the residents "stroll up" their home instead of "walk to"? Then the perception of the circulation space changes and encourages new uses. Instead of being a functional walk from street to flat, the neighbours could consider it as a pleasant architectural promenade without specific purpose, taken in this transitory place so as to meet or be seen by neighbours. If the circulation space becomes a flexible place, it invites the inhabitants for changing their routine and spending time in, having a break, meeting neighbours, etc. Temporary uses have to be introduced within this common space. It has to accommodate a plurality of experiences and practices (Rebois, 2011).

I. 3 A disregarded space in the renewal of housing

Today a renewal of housing occurs according to the issues of sustainable development. This involves new technical and economical solutions for buildings as well as new ways of living together. Social sustainability argues for strengthening a livable neighbourhood, because it increases the social inclusion and highlights local community (as Barton mentions in the table on the right page). In this sense, housing is the first place where a social solidarity and equality can grow, and a mixed neighbourhood is essential for this. In an apartment building, the circulation space is the meeting place which strengthens the neighbours' relationships. Its architecture has to be federative and connect the neighbours together.

The first inhabitants' demand when they come to live in a flat is to get rooms with certain qualities: a sunny orientation, a pleasant height, nice

"Can we really say that there is a renewal of collective housing taking place in Europe? Are we witnessing today the emergence of a new mode of living in a collective way, on a continental scale?"

Fort (2009: 35)

Table 4.1 *Ten Reasons for Strengthening Neighbourhoods*

Reasons	*Objectives*
1 Cutting greenhouse gas emissions	• Reduce the need to travel • Reduce car reliance • Increase energy efficiency in buildings
2 Closing local resource loops	• Reduce demand for non-renewable resources • Reuse and recycling of resources locally • Local water sourcing, treatment and aquifer recharge • Local low-input food production
3 Enhancing local environmental quality	• Promote local distinctiveness and heritage • Create an attractive public realm • Enhance local habitat diversity
4 Creating a healthy environment	• Improve local air quality • Promote an active life-style (especially walking) • Encourage consumption of fresh fruit and vegetables
5 Increasing street safety	• Reduce the chance of vehicle/pedestrian accidents • Reduce the fear of violence
6 Increasing accessibility and freedom of choice	• Choice of transport mode for trips • More facilities accessible locally
7 Equity and social inclusion	• Choice of facilities within easy walking distance • Viability of public transport
8 Local work opportunities	• Accessible jobs for those tied to the locality • Reduce transport emissions
9 Value of local community	• Facilitate accessible social networks • Promote mental health
10 Increasing local self-determination	• Increase user/citizen control • Management of decentralized systems

Barton, 2000: 52

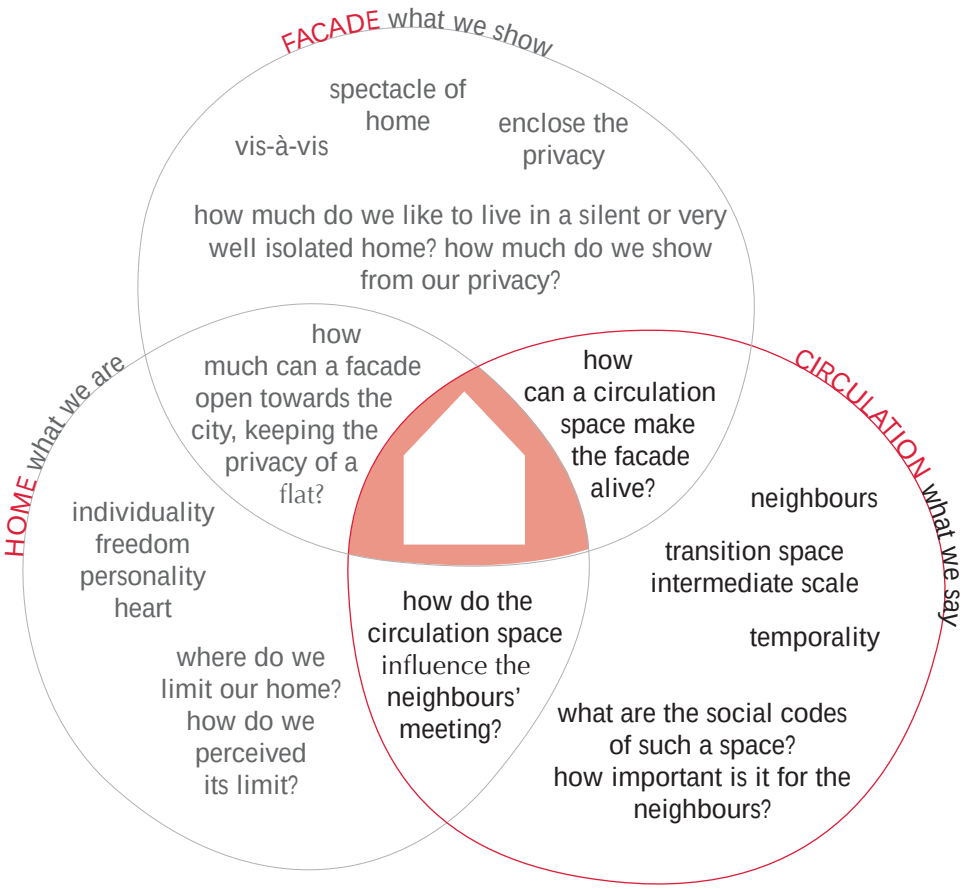
views, etc. With the issues of sustainability, new apartment buildings offer meeting places as common premises, greenhouses, terrace on the roof, etc. But the architects' and inhabitants' interest for the circulation space is still low whereas it also has a great potentiality of being a place to gather. In the design process, entrance, corridor and staircase are often left out and don't represent noble rooms, like an apartment can be.

Only few spatial studies have been done in precedent architectural literature. In a social scale, a few explorations focus on the graduation of privacy this space involves: Roch (2006) and Moley (2003) are the main references in this field. Hertzberger (1991) and Eleb (2011) investigated different scales of housing and how they influence uses. Le Corbusier was however among the first architects to have considered the circulation space as a public walk. He called "interior streets" the corridors of his apartment buildings.

I. 4 Methods and structure

This thesis aims to create a new investigation, focused on the thresholds of privacy through the circulation space and how they can encourage new uses. The spatiality and temporality of the circulation space are redefined, for it to be both a passage and a meeting place. Theoretical exploration includes literature studies, from french and European references, from books and exhibitions. Some apartment buildings are chosen to highlight the transition from public to private. Their descriptions are based on study visits, interviews with inhabitants and spatial analyses, from the architect's concept to the reality of the project. Their different typologies emphasize three key issues: the vertical connection, the horizontal connection and the spatial flexibility. This criteria is implemented in the project of an apartment building, in Linköping.

The circulation space is defined through the social, urban, building and micro scale. In the second chapter, the social issues raise the question of transitions and limits between the public and private spheres. The third chapter highlights two architectural movements: the Modern Movement and the Team X. Both of them worked on urban concepts that articulate pedestrian paths between the flats and the city. In the fourth chapter, the analyse of nine housing buildings introduces a set of spatial elements that can improve the quality of this intermediate space. The micro scale is experimented in the fifth chapter, with the project of an apartment building. The design process focuses on the flow and furniture of the circulation space and its connection with the flats. The sixth and last chapter concludes this thesis. It demonstrates how flexible the circulation space is, from a functional view to a recreational one, and how it can strengthen the neighbours' relationships.



The research focuses on the circulation space and overlapping the concepts of facade and home

This thesis formulates a set of criteria that forms a base for further investigations. It aims to give inspirations for architects and designers to deal with the issues of threshold, transition, limit and privacy in circulation space.

I. 5 Personal background

The french bachelor in architecture, from the École Normale Supérieure d'Architecture de Paris-Belleville, taught me the design of a space. In the studio "UNO" created by the architect H. Ciriani and influenced by the modern movement, I worked on the transition between the different rooms of a house: the spaces did not have a door, the furniture created the privacy. With the Master's Programme Design for Sustainable Development at Chalmers, I had the opportunity to understand how the sustainable development influences the design of a building from technical, economical and social perspectives. With the studio "Design and planning for social inclusion" taking place in a suburb of Gothenburg, the project was to renovate an apartment building, including new common premises for the neighbours. In the studio "Planning and design for sustainable development in a local context", I explored new ways of living in a small scale city as Mariestad: the housing project developed intermediate spaces between street and flats.

The interest for housing has always been my main motivation for being an architect, as the choices of my previous studio show. The modern theories of Le Corbusier have inspired the design of most of my projects. Furthermore, I walk (almost) everyday to school. On my way, I am used to look up. The variety of facades is for me very interesting and especially the outdoor spaces they include: how can a similar element like a terrace, a balcony or a passageway, express different languages in different situations. I am always very surprised to see flat and anonymous facades when these could reflect the indoor life of a building. I also realise how beneficial it is to spend time outside having some fresh air, especially in the winter when we are used to being confined inside. With this thesis, I combine these subjects and aim to show how a facade can be an open space towards the city. The circulation space is a hidden and depreciated place within the apartment building. I want to highlight how a circulation space can sustain the neighbours' relationships.

II. Social scale

Girette (2013) *Bo01*

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"The value of a long promenade, a volume that's satisfying and interesting. The architectural spectacle catches the eye, we follow the way and perspectives develop in a large variety."

Le Corbusier (1927: 154)

Corridor: a long passage in a building from which doors lead into rooms
Privacy: - a state in which one is not observed or disturbed by other people
- the state of being free from public attention
Limit: the terminal boundary of an area
(Oxford Dictionaries, 2013)

II. 1 Corridor, passageway and rites

A circulation space gives access to the flats of an apartment building. It is a transitory place where the inhabitants walk through the entrance, the staircase and the corridor.

The corridor constitutes a horizontal and functional connection. Its length accentuates its perspective, as it looks like a very long room. Its artificial light and its materiality gives rhythm and variations to this indoors space, as show in the pictures page 25. The corridor is a walled-off and closed space, not connected with the street but rather to the flats. Its spatial limits make it private.

A passageway is a kind of corridor, located on the edge of the housing building. This intermediate space, often outdoors, enables to see the landscape and the spectacle of the city. Its presence enhances the composition of the building and facilitates the identification of the flat (its front door becomes visible from the street level). Then an apartment gets closer to the image of a house, as the passageway can be appropriated by the inhabitants as storage, playground for children, a place to hang out the laundry or a terrace where to have a coffee. These temporary uses depend on the qualities of this space (proportions, light, colours, scale, materiality, etc). A passageway is considered either as a semi-public or semi-private space, as its open limits offer a visual and sound connection with the street. The hustle and bustle of the surroundings and the liveliness of the apartment building overlap.

In anthropology, a limit defines the unity of a territory and can sometimes constitute a space. This is the case of the circulation space as it borders street and flat. Then to sustain the limits between public and privacy, an intimidation system is settled: the door and its code control the crossing (Segaud, 2010). Besides, the circulation space is marked by rites, daily repetitive and trifling actions. Objects like door, mailbox, doorbell bring about routines for the neighbours and strengthen the settlement of the privacy, a home. The social convention, when neighbours meet, is to greet each other. But when they pass in silence, they stay anonymous, like in the street (Augé, 1995). These individual or collective actions change according to time and create different rhythms through days, months and years. In summertime the rites transform and the limits of the privacy are less strong.

II. 2 Spatiality and privacy

Anonymity

In the fifties, the design of new apartment buildings minimized the connections between street and flats. The small windows and the flat facades created a strong limit between the public sphere and the private one. The density of these new buildings and the large number of neighbours did not create an environment adapted for meetings and appropriations, both in a building and urban scale (plan on the right page). Besides, the circulation space was only thought of in its functional dimension, without considering its social role (Roch, 2006). Entrance, staircase and corridor were designed as a cage, often narrow and dark.

Conviviality

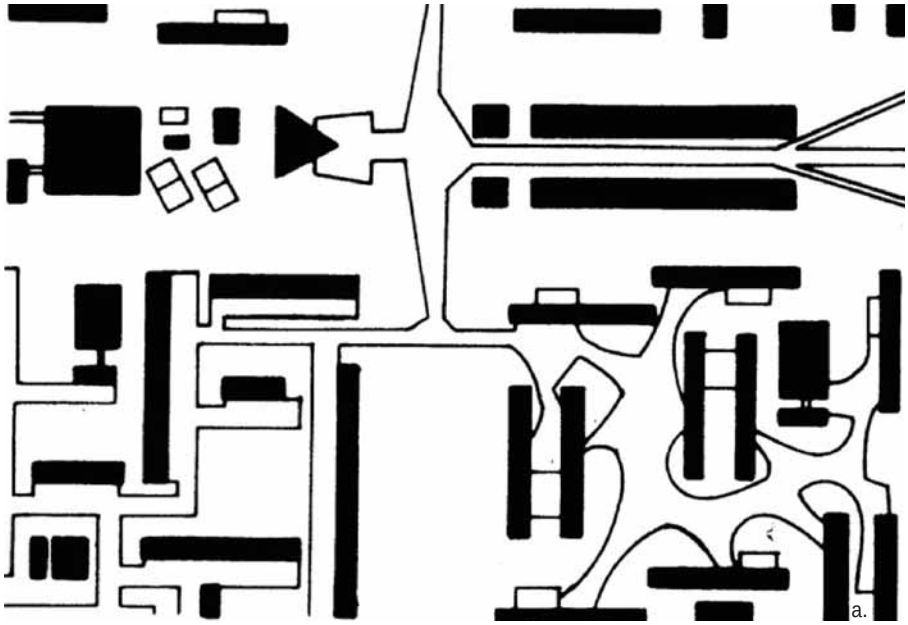
The events of May 68 demonstrated the inhabitants' will for new forms of sociability. This ideological transformation sought to improve the conviviality, being friendly and lively. The architecture had to incorporate these expectations in its spaces. In the seventies, courses in social science were introduced in architecture schools (the Chicago school was a pioneer in this field). Then the limits between public and private were re-investigated: the spatial relations from street to flat introduced the problematic of the intermediate space (Moley, 2003).

This issue brought a new typology of housing: the intermediate housing. The shape of the building looked like a pile of houses or a pyramid, mixing individual and collective life. The circulation space was located under this volume and was usually composed of outdoor spaces, like passageways and footbridges. Then the walk was sinuous and the overlapping of volumes gave the impression of going through a labyrinth. In this modular environment, the undulation of the circulation produced flexible spaces. Habitat 67 was one of the first buildings of this new type. The Israeli Canadian architect Moshe Safdie designed it for the Universal Exposition in 1967 in Montreal (illustrated on the right page). But this intermediate housing has some limits: the maintenance is difficult, the self-sustaining character does not integrate the building in the density of the city, the building consumes a lot of land, etc (Eleb, 2011). Today, this typology seeks to develop in denser forms, as shows with the housing project "mountain dwellings" designed by the Danish architect Bjarke Ingels in Copenhagen.

Communication

With the birth of new media (television, internet, smart phone...), the public sphere got more public as the private one strengthened. At the same time,

a. Rowe & Koetter (1978) *Modernist.* b. Rezendi (2006) *Habitat 67*. c. Jromero23 (2011) *Habitat 67.*



a.

b.

c.





their overlapping increased with the intrusion of the public life into the privacy (with these new means of communication). The inhabitants can keep contact with others from their home. Furthermore, it also accentuates the individualism, defined by Alexis de Tocqueville as "a mature and calm feeling, which disposes each member of the community to sever himself from the mass of his fellows, and to draw apart with his family and his friends" (Moley, 2003: 12). Finally, this situation reflects new ways of living in the domestic space: it does not weaken the social relationships, it only shows its changing in nature (Roch, 2006).

Community

Since the seventies and with sustainable development issues, researches intend to create ecological, economical and social solutions in order to minimize the footprint on the environment. Social sustainability aims to overcome isolation and the loneliness (Barton, 2000). The concept of a «community» is highlighted, as a "network of people with common interests, with the expectation of mutual recognition, support and friendship" (Barton, 2000: 5). Public places are developed in such a way that the "local community will feel personally responsible for them, so that each member of the community will contribute in his own way to an environment that he or she can relate to and can identify with" (Hertzberger, 1991: 45). The creation of a community aims to strengthen the social relationships. This thought, extended to the neighbourhood, produced the concept of "eco-neighbourhood". This voluntary community intends to live with a minimal ecological impact. The use of resources is controlled, the waste is recycled and the creation of energy is integrated in the building design. The social relationships are encouraged with common facilities and activities. The nature is introduced in the daily life of the inhabitants with vegetal walls, urban farming, etc (Eleb, 2011).

II. 3 A semi-public or semi-private transition?

The definition of the circulation space as a «transition space» is modern and was created in the seventies. It groups sociological and spatial interpretation, both overlapping. It is an intermediate scale between the individual and the anonymous mass of the society: the public man disappears when the private one appears (Moley, 2003). The link between the city and the apartment building is expressed into this superposition of public and private space, the connection between the street and the inside of the lot. The list of antagonists describing this situation is long: indoor vs outdoor, inside vs

a. MGR, 2010. b. Jijis, 2008. c. Alda, ca 2010. d. Centaurea, ca 2001. e. Girette, 2013. f. Girette, 2013. g. He, 2007. h. Girette, 2013. i. Granada, ca 2011. j. Naanopok, 2010. k. Yukiko, ca 2006. l. Girette, 2013. m. F.R.J. photography, 2009. n. Toad, 2013. o. Kriss on flickr, 2010.


a.


b.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outside, (semi) private vs (semi) public, individual vs collective, etc.

Then the definition of this transition place gets ambiguous: is it a semi-public or semi-private space? A circulation space is semi-public when it is seen as the extension of the street. In opposition, it is semi-private when it is seen as the extension of a dwelling. No answer can state if a circulation space is semi-public or semi-private since it depends on each design and one's point of view. The limits, dimensions, the thresholds, the openings, the porosity, and the filters are components that create the layers of privacy. They participate in this definition. Then the inhabitants have the last word: they have their own definition of what is privacy according to their culture, their way of living, their education, etc. This will influence the appropriation of the circulation space and the way the neighbours live in it.

Place attachment

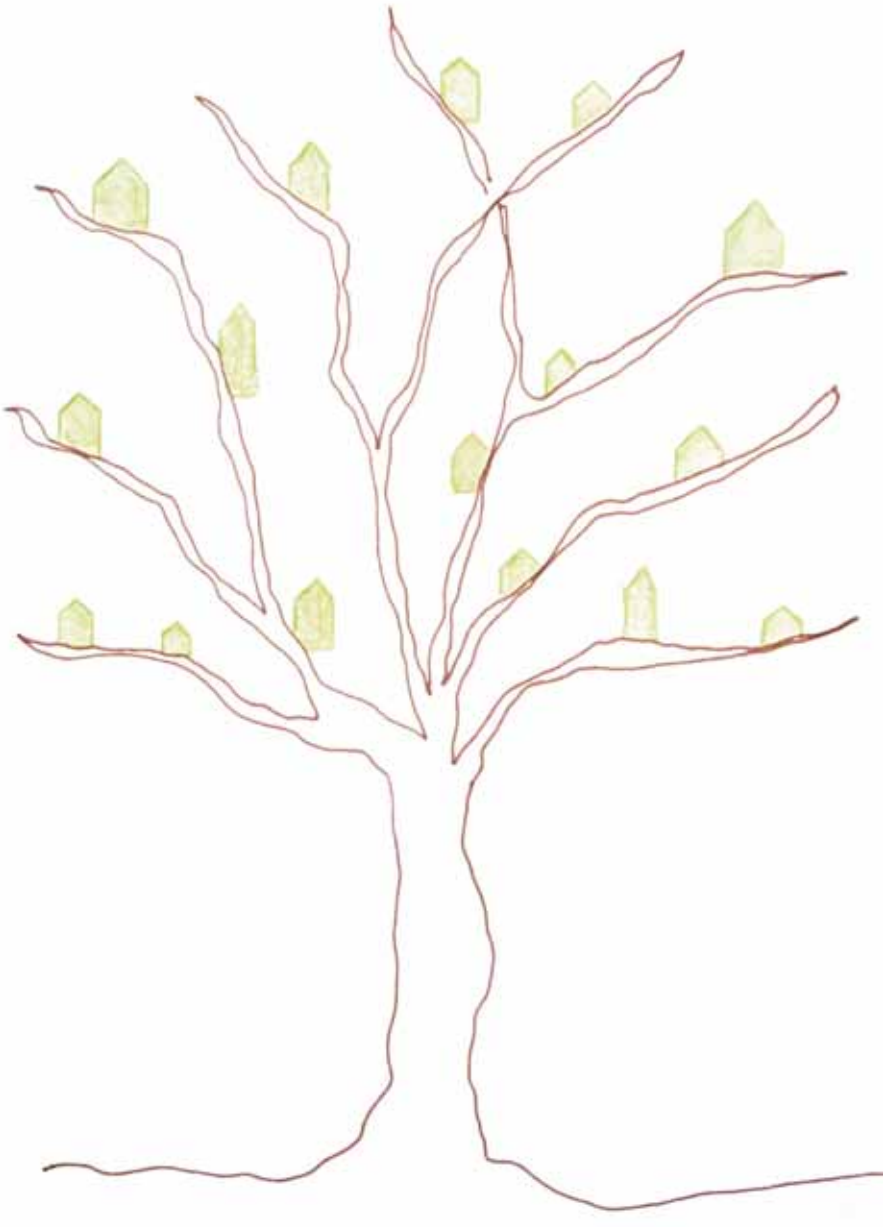
The definition of semi-public and semi-private is also connected to place attachment. By spending time in a place, we develop our collective memory and emotions. The identity of a place gets personal and unique. The domestic scale of the circulation space links the inhabitants with their neighbourhood, the neighbours with their buildings and its premises. These interactions make obvious the necessity of having an inviting and a welcoming space.

The scale

Small rooms and domestic scale places tend to look semi-private when large transitions and openings towards the street and the city seem more semi-public. Small places get crowded quickly whereas large ones look empty most of the time. Since people always attract people (it is obvious for a restaurant : we often go to the one with more clients) and in order to make the circulation spaces attractive, it is better to design small scale transitions and consider these spaces as semi-private. The project developed in this thesis, will implement this argument: its design aims to make the circulation space as an extension of the dwellings.

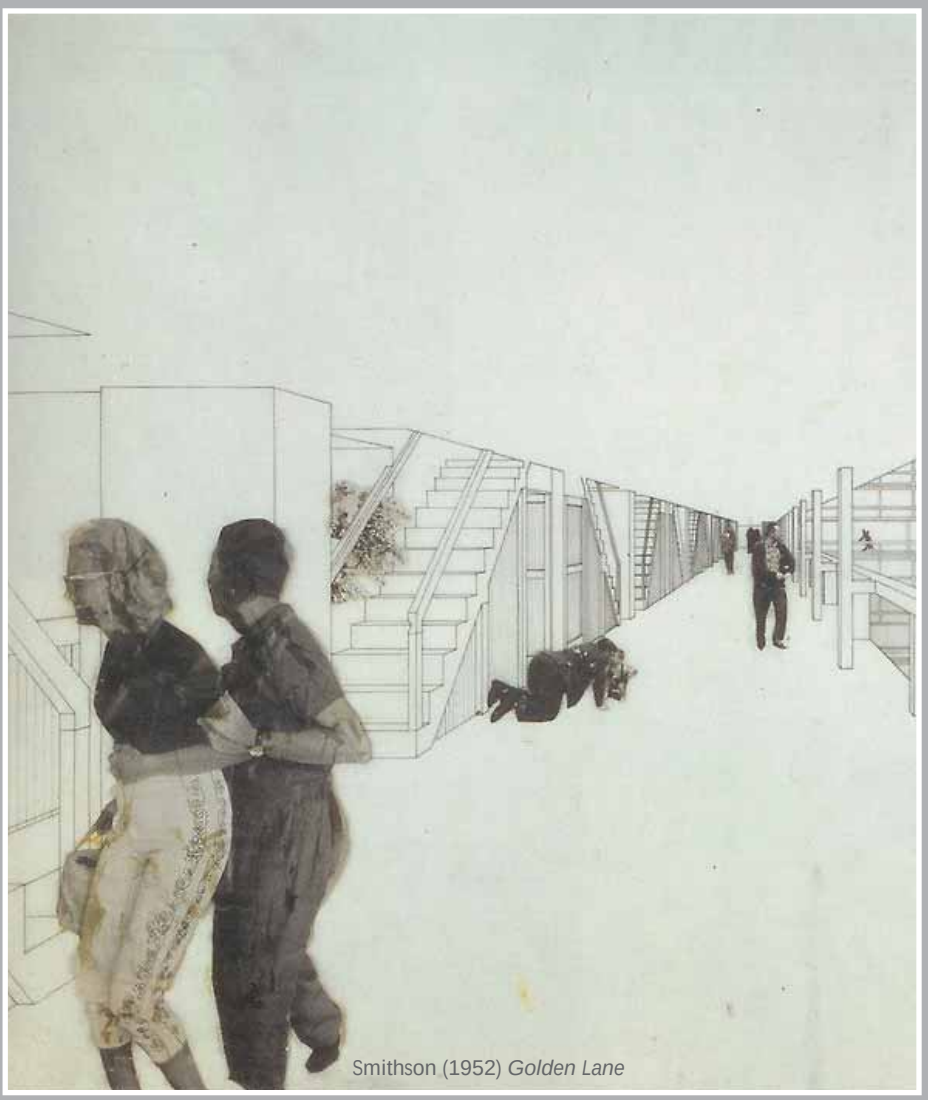
"Anonymous spaces are converted into places endowed with meaning, which serve as objects of attachment. Attachment is defined as a construct representing mainly the emotional bond to a location, but which includes also cognitions and meaning, and is related to personality tendencies of the individual."

Casakin & Kreitler (2008: 80)



The circulation space sustains the quality of an apartment building

III. Urban scale



Smithson (1952) *Golden Lane*

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"Corb's disappointment stemmed from the fact
that he intended to build a whole suburb
in a cluster of such blocks."

Banham (1962: 92)

In the second half of the 20th century, the modern architecture movement and the Team X made research where the experience of the pedestrians was central to their understanding of cities and landscapes. The utopian projects of Le Corbusier and, Alison and Peter Smithson are chosen to highlight different conceptions, connected with the issues of a circulation space. The theories of these architects moved from paper to actual projects, as the "Unité d'habitation" and "Robin Hood Garden" shaped a functional promenade and an imaginative one (Risselada, 2011).

III. 1 The "vertical city" of Le Corbusier

In 1930, the french architect Le Corbusier designed the "Plan Obus" for Alger. This unbuilt project formed a ten kilometres long building-road. On top of twelve levels, a motorway spreads on the whole length of the roof. This utopian plan established a vertical city that grouped the four urban functions: living, working, recreation and circulation. It aimed to avoid the "monstrosity of sprawling accumulation" of infinite cities and private housing estate (translated from Le Corbusier, 1955: 105). Finally, the "Plan Obus" introduced a series of elevated pedestrian levels, connected in both axes to form a biaxial pedestrian grid (Frampton, 2007).

The CIAM (International Congresses of Modern Architecture) was founded in 1928 by a group of twenty-eight architects, lead by Sigfried Giedon and Le Corbusier. Their objective was to spread the modern principles in the fields of landscape, urbanism, industrial design, architecture, etc. The fourth congress took place in 1933 in Athens investigating the theme of the functional city, based on the study of thirty-three cities. In 1942, Le Corbusier published these conclusions in the "Athens Charter". This essay describes the principles of a "Radiant City", composed of buildings elevated by "pilotis" (piles). The ground surface formed a continuous park where the pedestrians were free to wander at will (Frampton, 2007). Le Corbusier wanted to separate the pedestrian streets from the car roads since the street represented the pedestrian domain. The intrusion of cars became a menace for the public life and the architect aimed for "the pedestrians to tread upon anew the friendly ground" (translated from Le Corbusier, 1955: 105).

III. 2 From the CIAM to the Team X

In 1953, the CIAM IX in Aix-en-Provence (France) was the first meeting where the british architects Alison and Peter Smithson participated. At this time, they introduced the "Urban Re-Identification Grid". This provocative grid transformed the four modern functions (housing, working, recreation and circulation) into scale associations that connected house, street, district and city (Risselada, 2011). According to the couple, the modern architecture

lost the human dimension, as the uses of domestic spaces were depreciated. The Smithsons' projects articulated the hierarchy between the public and private realms, as social utopias for present and future. They developed places with identity, personality and home-coming (Jencks, 1991).

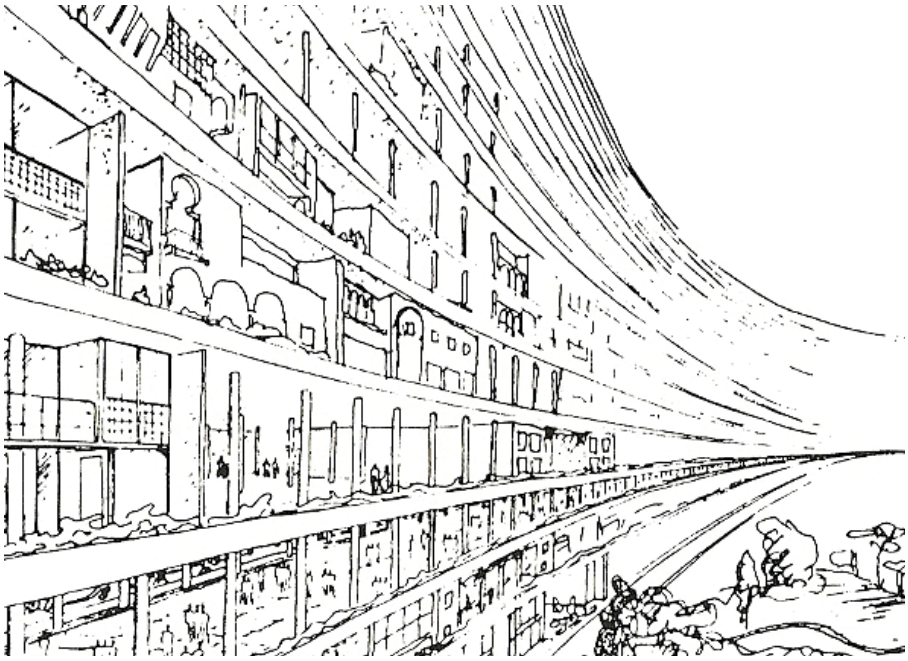
In 1956, at the CIAM X in Dubrovnik (Croatia), a new generation of young architects (Alison and Peter Smithson, Aldo Van Eyck, Georges Candilis , etc), gathered and formed the Team X. Finally, Le Corbusier put an end to these congresses in 1959.

III. 3 The "Cluster city" of the Smithons

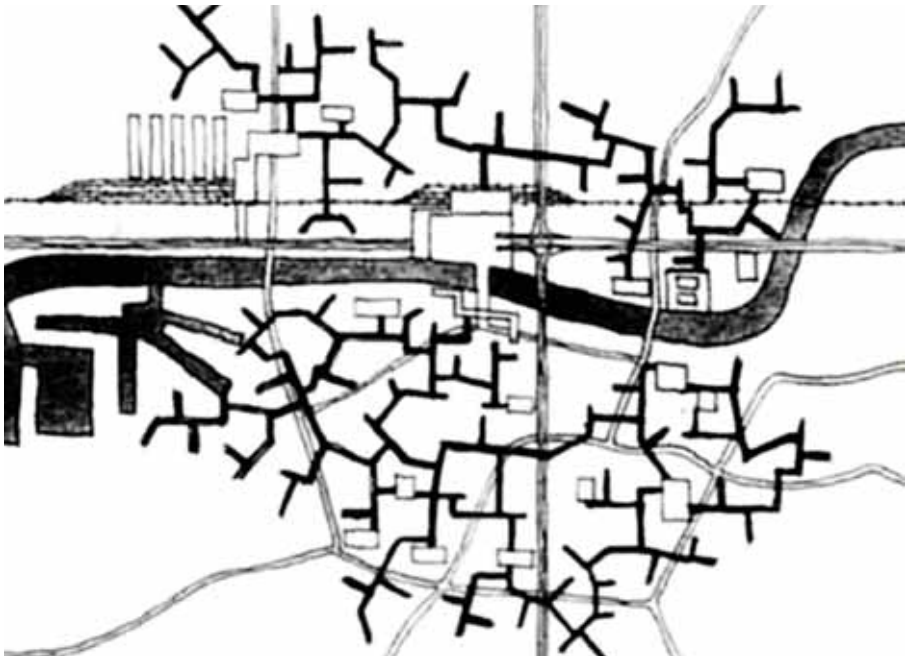
The concern for the dwelling and street relationship was continuous in the work of the Smithsons. Their urban planning proposal, called the "Cluster City", revealed this concept. The architects disapproved of the word neighbourhood, used in modern architecture, and replaced it by "cluster", forming a more imaginative and more creative city. The concept articulated "streets-in-the-air", as elevated pedestrian paths connecting the different blocks. The angular and branching network was a central component of a high density city, separating cars and pedestrians (Risselada, 2011).

In 1952, the unbuilt housing project "Golden Lane Estate" developed a continuous horizontal "street-in-the-air", running the full length of each block and linking the lifts at each end. The front doors of the flats opened onto this circulation space: pairs of doors were designed at right angles to the passageway and facing each other. This "two-dimensional band" (Risselada, 2011: 207) was wide enough for flexible and temporary uses. The Smithsons demontrated that:

> "Two women with prams can stop and talk without blocking the flow, and the decks are safe for small children."
>
> (in Risselada, 2011: 234)



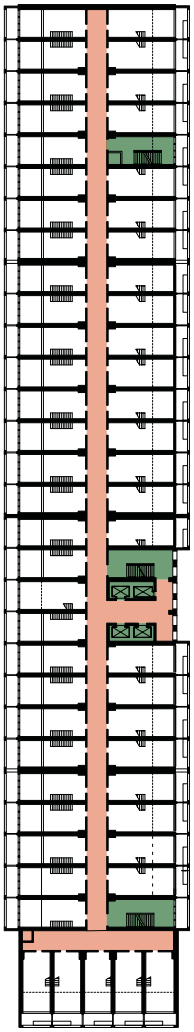
a. Le Corbusier (1930) "*Plan Obus"*



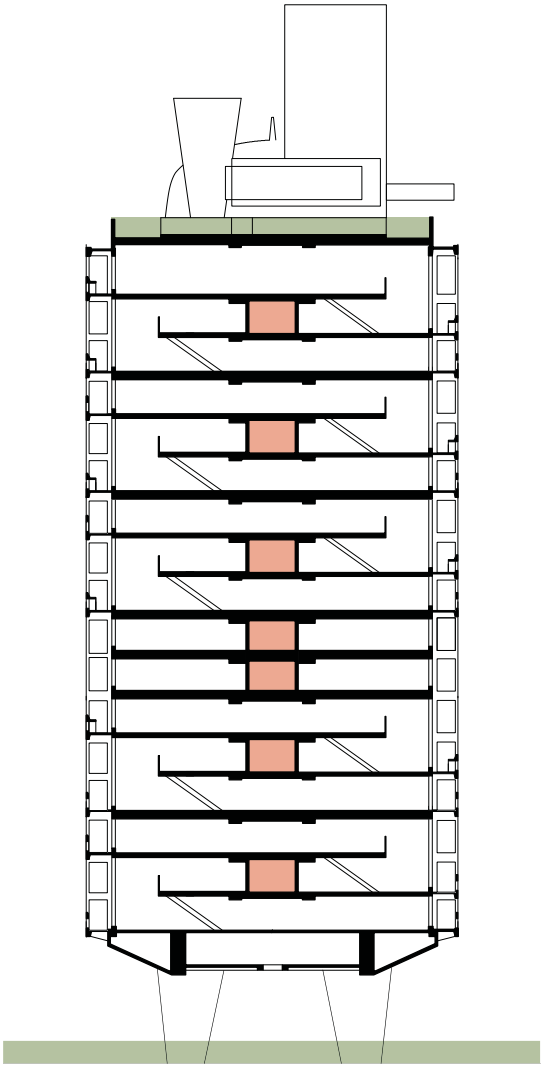
b. Smithson (1953) *The "Cluster City"*

Unité d'habitation

built in 1952, and designed by Le Corbusier
1 600 inhabitants
337 flats / 23 types
public programme included within the apartment building
18 floors



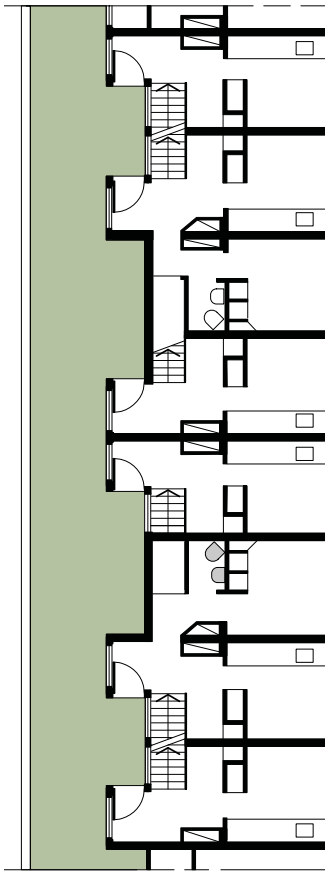
a. French (2009) *Plan 1/1000°*



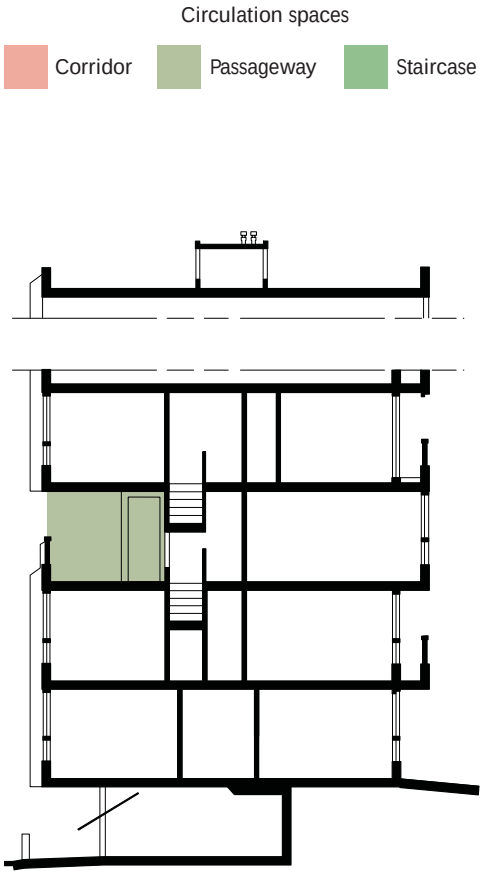
b. French (2009) *Section 1/500°*

Robin Hood Gardens

built in 1972, and designed by Alison and Peter Smithson
ca 850 inhabitants
213 flats / between 2 and 6 rooms apartments
public programme not included within the apartment building
two buildings of 7 floors and 10 floors



a. French (2009) *Plan 1/200°*



b. French (2009) *Section 1/200°*

Unité d'habitation

The major realisation of Le Corbusier is enhanced into the "Unité d'habitation", built in Marseille in 1952. Then the architect introduced the public life within the housing, from the open ground floor to the roof-terrace. The entrance is a large and inviting room with transparent walls. On the seventh floor, the eighth floor and on the roof, facilities such as shops, hotel, offices, school, gym, etc, attract the inhabitants living in the surroundings. The large terrace on the top floor has a panoramic view of the city, and is surrounded by a path for running around. The architect designed the corridors as "interior streets". They are accessible for everyone (as the crossing of the entrance is not restricted only to the residents). The mailboxes are located at the landing of each floor and the front doors of the flats are composed as the main limit between public and private. In the plan, the central position of these public pedestrian paths is purposely functional, giving access to the flats on both sides of its length.

The main connection from street to flat is developed by the "interior street". It aims to improve the horizontal access. But on the other hand the vertical connection is lost. Either because the building scale is too high, or because the four stairwells (one outdoor, three indoor) are functional. The warm climate of Marseille has maybe influenced the position of the corridor to the centre of the building. In summer, the dark "interior streets" are temperated rooms that cool the inhabitants. But as Le Corbusier said, "our eyes are made to see forms in light" : in the corridors, the lack of natural light is still an issue since it limits the spontaneous appropriations of the neighbours. Even if the residents appropriate these corridors at Christmas (as they decorate their front door), the main neighbours who spend time in these streets all the year round are children (as observed at the study visit). Finally there is a paradox: Le Corbusier invited the public life within the building, by creating interior streets for pedestrians. But the non-flexibility of the circulation space limits the gathering, and the promenade within the building becomes uncomfortable and non-inviting. The main meeting places are the ones with activities: the seventh, eighth floor and the roof.

Today, the postman still distributes letters to each floor. But this manifest housing has become elitist. The population is not very mixed. A lot of inhabitants are living there because they are admirers of Le Corbusier and the average age of the inhabitants is between fifty and sixty. The offices of the eighth floor are mainly architects' offices. The shops and the facilities changed a lot when some functions disappeared. The common guests' rooms (on the eighth floor) were sold to a hotel since the inhabitants' management did not work: today it is a fancy and expensive hotel.

Robin Hood Gardens

With the Robin Hood Gardens housing complex, Alison and Peter Smithson designed both a "pedestrian deck" and a "pedestrian precinct", as the lot is traffic-free with parkings located in the basement and the circulation space is meant to be "streets-in-the-air" (Risselada, 2011). The project includes two apartment buildings facing each other with a garden in between. The horizontal volumes aim to limit the number of floors, for the flats to be easily accessible from the street level. The entrances of Robin Hood Gardens, located at the bottom of vertical circulation towers, are narrow in order to limit public and private spheres. The "streets-in-the-air" are designed to be an "in-between" space, having a close and physical relation to the street (Risselada, 2011). Their location on the outer faces of the buildings are meant to be a filter from urban sounds for the flats. The deck has no columns, so the inhabitants can enjoy an uninterrupted panorama of the surroundings. Since the blocks are bent in shape, the view changes along the way. Instead of having narrow access galleries, these wide access passageways provide an extension of the apartments and a social space for meetings. Its dimensions give a high degree of flexibility and suggest varied uses: the children are able to play safely, the family can do work around the house, and friendships are formed more easily (Risselada, 2011). The facades of Robin Hood Garden are drawn like a skin, inspired by Mies van der Rohe's aesthetics, where the exterior membrane only has a little depth in order to express generalizing aesthetic (Risselada, 2011).

The narrow stairwells are designed as escape exits, in order to manifest a strong border between the public and the private. But this plan does not invite the inhabitants to enter and limits the access. The vertical continuity from street to flat is lost. In opposition to Le Corbusier, the pair of architects did not aim to introduce public life within the housing: instead they wanted to increase the territory of the privacy, making the "streets-in-the-sky" as extensions of the dwellings. Today, these spaces are "under-used, the collective entrances are paltry and a few have been vandalised. Indeed, they are dark, smelly and dank passageways" (Jencks, 1991: 23). Even if the Smithsons wanted to provide a community building, the long "streets-in-the-air" are often empty and are not as lively as the traditional streets can be (Jencks, 1991).

This housing complex fell out of favour in the eighties as it got associated with social problems in social housing. In 2008, a campaign was run to get Robin Hood Gardens listed as a historical heritage in order to save it from destruction. But it could not be registered since it did not fully meet the criteria. Yet today, its renovation is still uncertain.


a.

b.


c.


d.

Robin Hood Gardens

a.

b.

c.

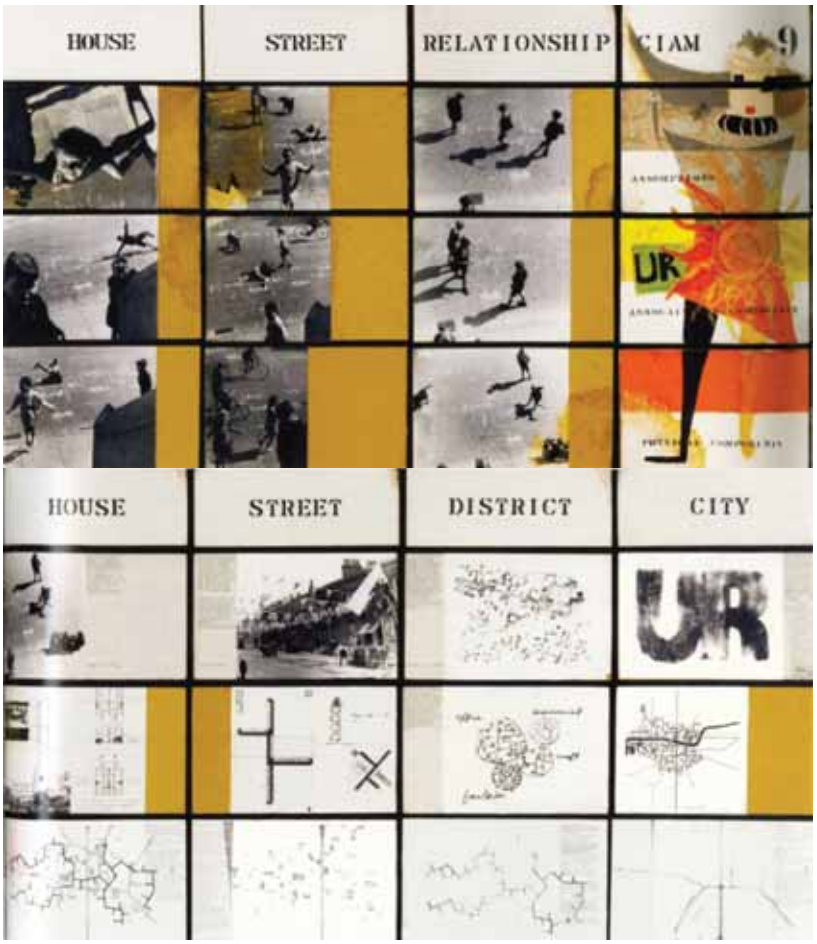
d.

III. 4 Conclusion

Robin Hood Gardens "pays homage to and at the same time is a critique of Le Corbusier's Unité d'habitation" (Risselada, 2011: 234). In both of the projects, the urban planning and the will to separate the pedestrian paths from the motor ways were starting points for their design. The circulation space was meant to be a public space for the neighbours to meet. The Smithsons enriched the concept of the "interior street" with the notion of flexibility and use. The "street-in-the-air" develops a multifunctional space, easy to appropriate.

Page 38: a. Girette (2012) *Staircase*. b. Girette (2012) *Corridor*. c. Girette (2012) *Lifts, red doors*. d. Girette (2012) *Front doors.* Page 39: a. Unknow photographer (2010) *RHGarden_2*. b. Faichney (2013) *Up in the decks*. c. Skovgaard (2008) *Robin Hood Gardens*. d. Skovgaard (2008) *Robin Hood Gardens.*

a. Le Corbusier (1955) *The four functions of urban planning*



b. Smithson (ca 1956) *Urban Re-Identification Grid*

IV. Building scale

Girette (2013) *Housing rue des Suisses*

IV. 1 Nine projects, 45
IV. 2 Three dimensions, 56
IV. 3 Conclusion, 62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2.


3.


4.


5.


6.


7.


8.


9.

IV. 1 Nine projects

Nine apartment buildings are chosen to highlight the diversity of circulation spaces. From 1993 to 2011, the nine architects from France, Scandinavia and Japan used, in the design process, spatial concepts that stress the transition from public to private. The projects integrate qualities that emphasizes either the horizontality of the circulation, the verticality, or the flexibility. Schematic plans illustrate the articulations between flat and circulation space.

Balcony

1. Transformation of Housing Block, Paris (France)
built in 2011 by Druot, F., Lacaton, A. & Vassal, J.-P.

2. Housing Rue des Suisses, Paris 14A (France)
built in 2000 by Herzog, J. & de Meuron, P.

3. Svartlamoen Housing, Trondheim (Norway)
built in 2005 by Brendeland & Kristoffersen

4. Housing "Immeuble-Villa", Vitry-sur-Seine (France)
built in 1993 by Paurd, B.

5. 8 Tallet, Copenhagen (Denmark)
built in 2010 by Ingels, B. (BIG)

Staircase

6. Gifu Kitagata Apartment Building, Gifu (Japan)
built in 1998 by Sejima, K.

7. Urban villas, Malmö (Sweden)
built in 2008 by Siegel, C. & Åqvist, P.

Passageway

8. Housing for postmen, Paris (France)
built in 1993 by Gazeau, P.

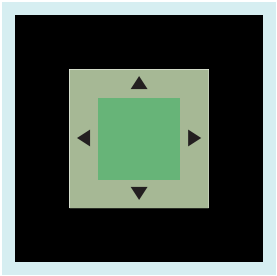
9. Friggagatan housing, Göteborg (Sweden)
built in 2011 by White Architects

Balcony
a threshold between the privacy and the public

Transformation of Housing Block, Paris (France)
built in 2011, designed by Druot, F., Lacaton, A. & Vassal, J.-P.
ca 119 dwellings, 17-storey building
The transformation of the housing building made bigger flats. The architects kept the existing structure and added a winter garden and a balcony. This set of functions create layers of rooms in the depth of the dwelling. This gives an extra space for the inhabitants who can choose to open or close them depending on the weather and the season.

Housing Rue des Suisses, Paris 14[A] (France)
built in 2000, designed by Herzog, J. & de Meuron, P.
ca 120 inhabitants, 57 dwellings, 2 buildings of 3 floors and 7 floors
The project is organized in three connected lots, including two infill blocks (of 7 floors), and an interior, long and narrow one (with 3 floors). This last block is accessible through a passage, located beneath the infill housing. This apartment building is designed as a free-standing element, including passageways on the southern facade, as a transition from the semi-public garden to the flats. The privacy is exposed with large windows but the step back of the facade gives some separation from the garden. As the south facade undulates, it softens the garden spaces. Furthermore, curving rolling wooden blinds protect the privacy of the dwellings. The upper passageways are wide enough to be considered both as an access to the apartments and as balconies.

a. Druot, Lacaton & Vassal (2011) *Transformation of Housing Block, Plan*. b. Girette (2013) *Housing Bois-Le-Prêtre.* c. French (2009) *Plan 1/200°*. d. Girette (2013) *Housing rue des Suisses*.

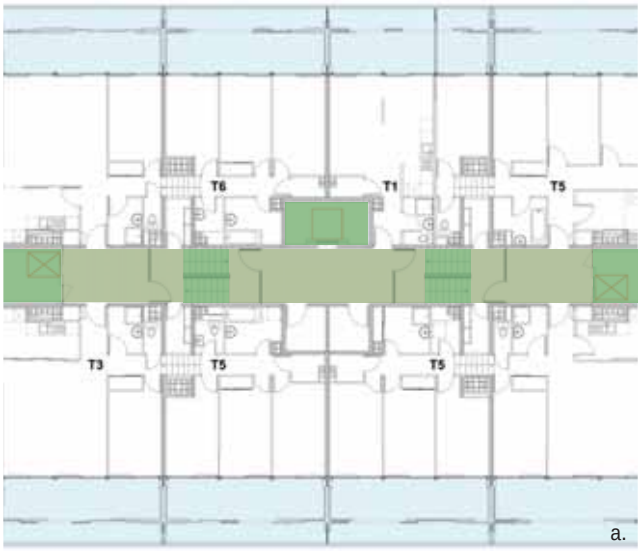


Flats

Balcony

Horizontal circulation

Vertical circulation



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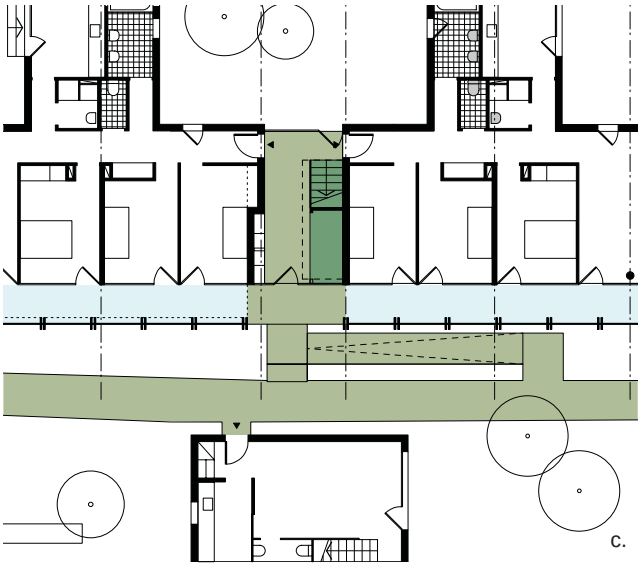


c.

d.

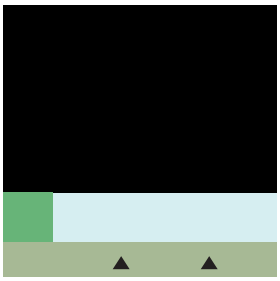
Balcony
a threshold between the circulation space and the privacy

Svartlamoen Housing, Trondheim (Norway)
built in 2005, designed by Brendeland & Kristoffersen
4-storeys building
The housing project in Trondheim develops a staircase all along the facade, facing the courtyard. Each flat integrates a balcony directly connected to this circulation space. The distance between the stairs and the facade gives more privacy to the dwellings.

Housing "Immeuble-Villa", Vitry-sur-Seine (France)
built in 1993, designed by Paurd, B.
ca 120 inhabitants, 57 dwellings, 9-storeys building
The architect designed the facade of this apartment building, as a meeting between the density and privacy concepts. The apartment building is divided into three parts, like a superposition of different types of housing, mixing the principles of the "immeuble-villa" and the Unité d'habitation of Le Corbusier. Each flat has its own garden and is double orientated. Besides, a terrace is located between the circulation space and the flats, in order to give the neighbours a meeting place and for the flats to get more privacy.

8 Tallet, Copenhagen (Denmark)
built in 2010, designed by Ingels, B. (BIG)
ca 1500 inhabitants, 476 dwellings, 10-storey building
This apartment building is a large mixed-use complex, in the shape of an "8", located south of Copenhagen. The form of the roof creates a continuous promenade, both for walkers and bicycles, from the street to the tenth floor, along terraces, gardens and townhouses. It connects the different horizontal layers of typologies: business and housing coexist in the same building. The south side has two green sloping roofs, in order to provide a strong visual identity (BIG, 2013). On the ground floor, the building is penetrated by a nine meter wide passage that links the two surrounding urban spaces: the park area to the west and the channel area to the east. Finally, this three-dimensional urban neighbourhood can grow easily into this large circulation space.

a. Brendeland and Kristoffersen (2005) *Svartlamoen Housing, plan*. b. Grandorge (2005) *Svartlamoen Housing, facade*. c. Paurd (2011) *Floor plan*. d. Girette (2013) *Housing Vitry*. e. BIG (ca 2010) *Level 10*. f. BIG (ca 2010) *Roof*.



Flats

Balcony

Horizontal circulation

Vertical circulation

a.

b.

c.

d.

e.

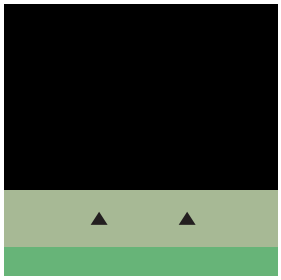
f.

Staircase
a pattern for the facade

Gifu Kitagata Apartment Building, Gifu (Japan)
built in 1998, designed by Sejima, K.
ca 300 inhabitants, 107 dwellings, 9-storey building
The project forms an introverted neighbourhood, as the public spaces are accessible only for its inhabitants. The apartment building is organized as a combination of modules that produce a multitude of plans and sections of flats. Each apartment has a semi-private terrace accessible from the passageway. This creates holes in the facade, which reduces the visual impression of massiveness. On every floor a long sidewalk is used both as the access way to the apartments and as a micro open public balcony. The silhouettes of people moving outside are visible like on a screen. The presence of stairs on the facade highlights the promenade, both vertically and horizontally. Its transparency and its materiality makes the walk very public, the life on the circulation space is like a show to watch.

Urban villas, Malmö (Sweden)
built in 2008, designed by Siegel, C. & Åqvist, P.
ca 30 inhabitants, 7 dwellings, 7-storey building
This housing includes two buildings. The lower one is looking inwards, and the taller one is facing the street. Here, the residents are the clients, so it maximizes their participation in the design. The taller building includes six dwellings on six storeys, as a superimposition of villas. It aims to preserve the qualities of a house, where each unit has its own entrance, garden and floor plan. The inhabitants share a rooftop piazza, an orangery and a courtyard, connected by an external spiral staircase. The lift in the core of the building gives access to the flats, but does not create landings for the inhabitants to meet. The main gathering spaces are the common spaces. The horizontal circulation is nonexistent, the access is reduced to the vertical ones, the lift and the stairs.

a. French (2009) *Plan 1/200°*. b. Unknow photographer (2007) *Public facade*. c. Arkitekten (2009) *Plan*. d. Girette (2013) *Facade.*

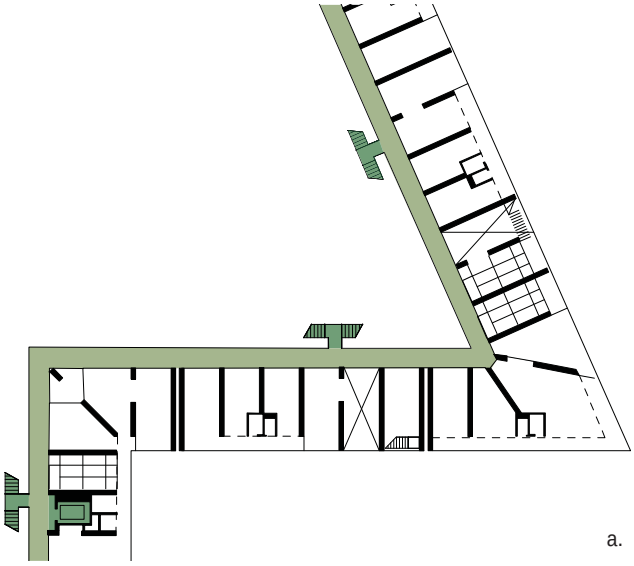


Flats

Balcony

Horizontal circulation

Vertical circulation



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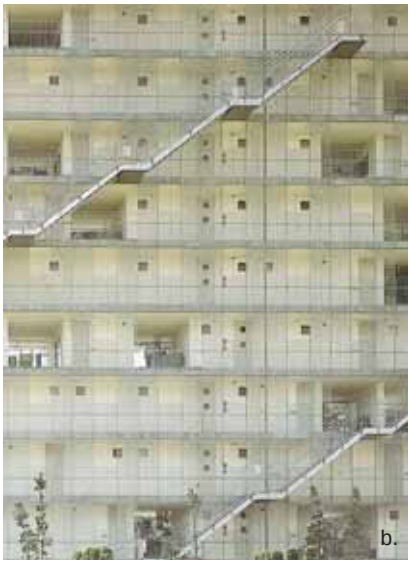

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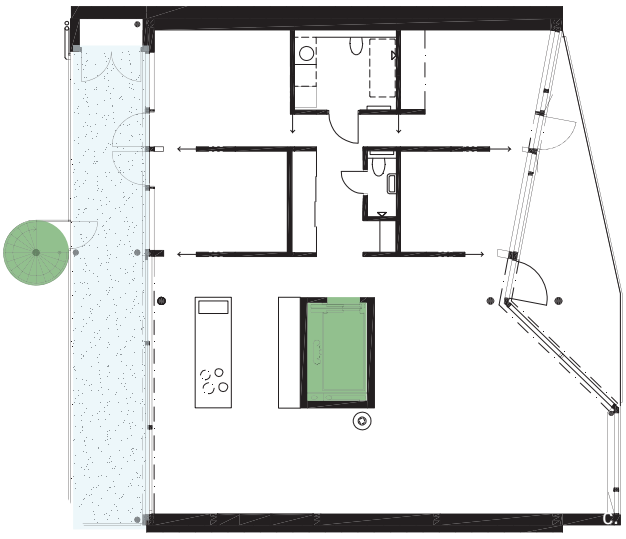


c.

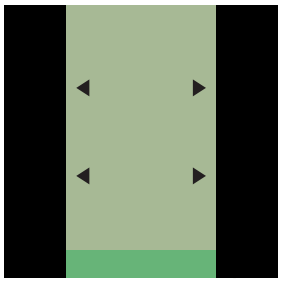
d.

Passageway
a space for meetings

Housing for postmen, Paris (France)
built in 1993, designed by Gazeau, P.
ca 50 inhabitants, 26 dwellings, 6-storey building
This project aims to overstep the urban constraints related to the density. The architect's concept was to minimise the size of the apartments in order to give large common spaces for the neighbours. And a rift through the building integrates a large circulation space. The project demonstrates also the necessity of a transition from street to flat, as the staircase is transformed into a noble space. The escape stairs become monumental and the landings are designed as terraces with a panorama over the city. But today, the inhabitants complain about the very bad insulation from flat to flat and from inside to outside. The wooden terraces are very slippery when it is raining, and it is forbidden to install furniture on the terraces in order to keep the passage unblocked, and complaints have occured because they are in vis-à-vis with other apartments.

Friggagatan housing, Göteborg (Sweden)
built in 2011 by White Architects
ca 1000 inhabitants, 452 dwellings, buildings with 6 floors and 8 floors
The building is exposed to noise from the railway on the north-west side. The blocks are therefore grouped into five pairs, in order to reduce the acoustic nuisances. The ground floor is used for public programs, and the inner courtyard is located on top of them. This elevated space provides some privacy from the street level and can be used as a common garden for the neighbours. But the scale of this project gathers a large number of neighbours, and is not adapted to create social life: Frida (a student who is living there) claims she only knows her next-door neighbours, but not the ones living in the opposite building. When she meets someone on her way home, she does not recognize the person. Finally, the dimensions of the passageways are not suitable for appropriations, or only at the end of the passageways.

a. Gazeau (1994) *Plan*. b. Girette (2012) *Terrace*. c. White Architects (ca 2012) *Plan*. d. Girette (2012) *Courtyard*. p54 / p55: Girette (2013)

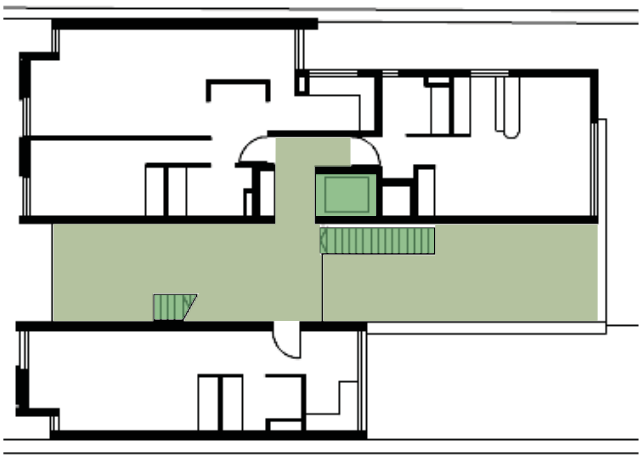


Flats

Balcony

Horizontal circulation

Vertical circulation



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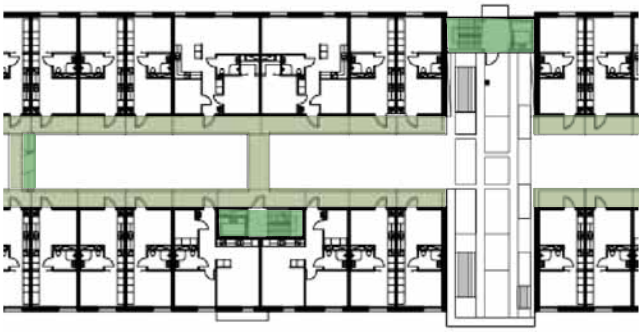


c.

d.

Housing «Immeuble-Villa»

Housing Rue des Suisses

Transformation of Housing Block

Housing for postmen

Friggagatan housing

Urban villas

Housing for postmen

Friggagatan housing

Urban villas

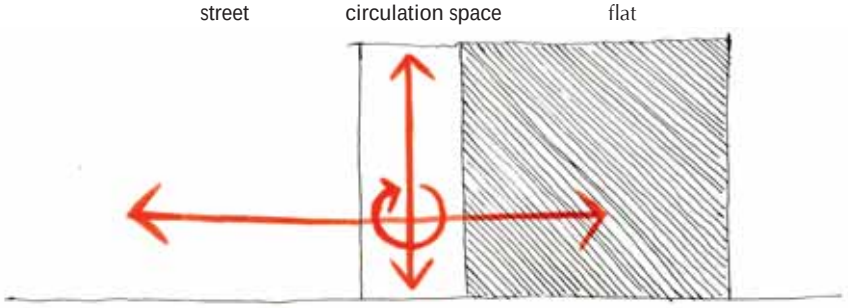
IV. 2 Three dimensions

The circulation space is qualified by three dimensions: the vertical connection from street to flat, the horizontal openings towards the surroundings, and the flexibility of the space for spontaneous appropriations. All of these features are considering the privacy of a dwelling. They create a hierarchy from public to private and emphasize or weaken their limits. The previous descriptions of case studies support the present criteria that aims to demonstrate key points that the design should be based on.

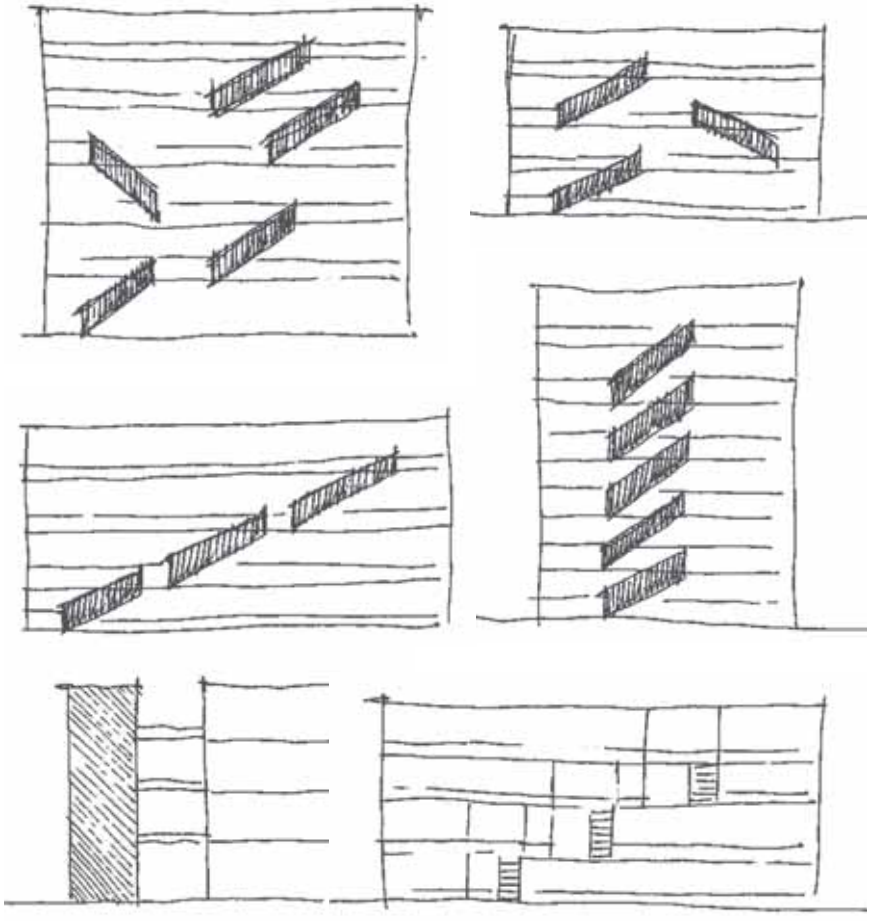
Vertical connection from street to flat

Le Corbusier, as well as the Smithsons, focused the design of their housing projects on the horizontal connections between the city and the flats. The vertical ones were developed through functional rooms, as the staircases and the lift gave access to the dwellings but did not include specific qualities. In the Unité d'habitation, the scale of the building did not invite the residents to walk to their dwellings, as the number of floors was too high. At Robin Hood Gardens, these rooms were hidden, dark and narrow, and shaped as emergency exits. Architects of today have tried to revitalize the staircases, by placing them on the facade of the building, making them visible from the street. The architects Sejima and Siegel & Åqvist highlighted their presence by letting the stairwells create a pattern on the facade and contribute to make it thicker. The connection from street to flat is emphasized since the stairs become a public place where the residents can walk around. They even preserve the privacy of the flat, like a layer between the public street and the private dwelling. Gazeau and White Architects centred this space even more: in their project the staircases become the main place to be, since they are just as wide as a flat. The staircases are not closed in a cage anymore, but have rather become a monumental place. The identity of the staircase is strengthened as well as the limits of the buildings. The stairs state the difference between the low public ground and the upper private floors.

In these projects, the apartment buildings are not defined by flat facades drilled by windows, but by the undulating movement of the stairs (as illustrated on the right page). But this improvement should not impose on the privacy of the flats. The stairs must keep a domestic scale that is comfortable to walk in. Finally, staircases emphasize the opportunity to rise above the city and contemplate the view.



The three spatial issues of a circulation space



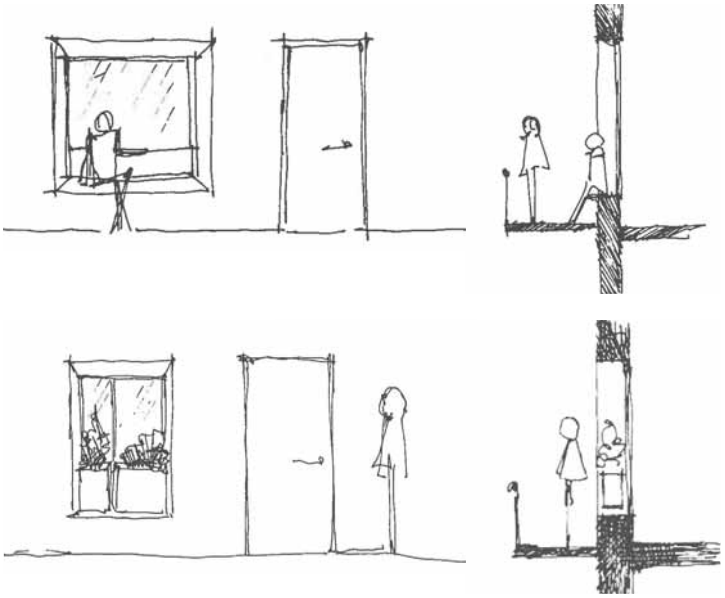
Different types of staircases integrated on the facade

Horizontal openings towards the surroundings

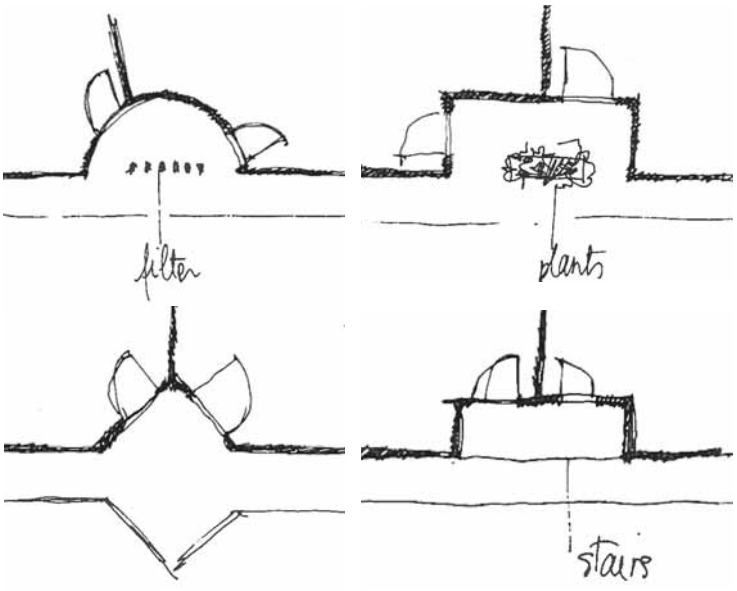
The facade is the border that limits the city and the housing. But the inhabitants' demands are antagonist: they need openings for fresh air and light but require to keep a visual privacy from outside. The facade has to be closed enough in order to create a safe feeling, but also porous and free in order to live in a comfortable way. The openings are a part of the identity of the building in the urban aesthetic. The diversity of designs is obvious. From flat facade to porous volumetry, a large variation of components and concepts exists: bow-windows, balconies, loggias, alignment, in retreat, screen-facade, thick-facade, etc (Moley, 2003). However, one of the main issue is still the vis-à-vis. It occurs when openings are facing each other in a frontal or diagonal way, between the surroundings and the building, the dwelling and the passageways, and between apartments. According to the function of the room, the inhabitants arrange their windows in different ways. They organise what they want to show and what they want to protect and hide. Then they control the image they want to expose. In the design process, architects must think about the directions of views in order to prevent intrusive looks from outside (Atienza, Houdemont, Paris & Wieczorek, 2007).

Le Corbusier shaped the horizontal passages as interior circulations. The corridors (or "interior street") do not have openings to the apartments, so the privacy of the home is protected. Whereas at Robin Hood Gardens, the architects increased the visual connections between the flats and the outdoor, as the front doors of the dwellings are face to face. Furthermore the apartments have large windows towards the passageways, and consequently the privacy of the home is exhibited to the neighbourhood. Today, this plan is not working, as the inhabitants have installed curtains to get some privacy from outside. In contemporary references, Sejima and Gazeau designed the horizontal circulations as a panoramic viewpoint: the passageways look like balconies or terraces where it is possible to admire the life of the city. These raised views emphasize the vis-à-vis between the circulation space and the surroundings. The link between this transition space and the flat is minimized, and the privacy of the dwellings is therefore protected.

The thresholds of windows and front doors invite to think about how the privacy is experienced by neighbours (as illustrated on the right page). The porosity of these limits, or the openings through which the indoor spaces are shown, is a central component that makes the apartments comfortable to live in. The vis-à-vis aims to integrate the dwellings in the rhythm of the city, avoiding the insulation of the inhabitants, but without becoming an intrusion. The views between street and flats, flats and passageways, and between dwellings have a social role, as the facade and its windows are the first form of sociability in an apartment building.



Extension of the apartment in the passageway



Exemples of thresholds: the front doors of dwellings

Spatiality: flexibility for appropriations

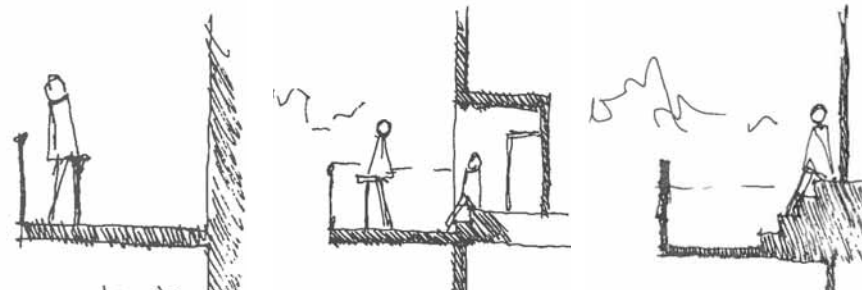
Today, the home is not limited by the borders of an apartment, as the inhabitants create their own limits of what the privacy is. In order to extend their flat, they personalise this transition space: they decorate their front door, they install outdoor furniture on the passageways, they grow plants next to their windows, etc. The more this space is flexible, the more diversity of uses it will have. Furthermore, the creation of temporary activities can increase the identity of this space, as the "European neighbours' day", the exchange of furniture, etc.

The "Unité d'habitation" developed dark and long circulation spaces, not comfortable to spend time in. The lack of natural light is obvious. It disconnects the neighbours from time: when they are in the corridor, it is impossible to know what time it is, what the weather is like, etc. This situation prevents the residents from staying inside, and the appropriations are limited. At "Robin Hood Gardens", the Smithsons developed outdoor spaces, connected with the city and the surroundings. As they wanted to create "streets-in-the-air", the passageways are wide and can be easily appropriated by the inhabitants. Their large dimensions aimed to invite the neighbours to install outdoor furniture, and they were free to arrange these objects (chairs, table, bike, etc) as they wanted, without invading the way. Paurd and Herzog & de Meuron planned the circulation space of their housing project as an attractive place where to spend time. They invite the residents to extend their home outdoors. Like large sidewalks, the passageways are both a place to cross an a place to stay.

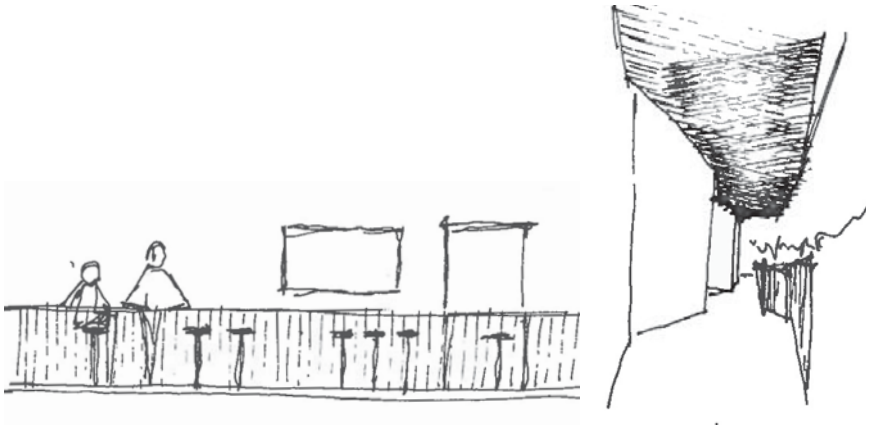
The spatiality of the circulation space has to, both, preserve the privacy of the flat and invite the residents to spend time outdoors. The inhabitants decide what they want: extend their apartment outside by making the circulation space as their own balcony (as illustrated on the right page) or protect their home and its limits.

Neighbours' community: creation and limits

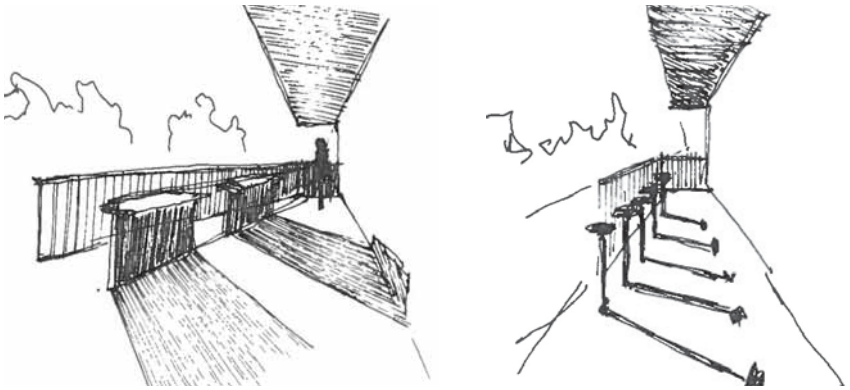
"Individual life and collective life are always distinct without being divided, and unified without being co-founded" wrote Moley (2003: 19). In *Entre ville et logement* (translated: *Between city and housing*), the author explains how the spatiality of intermediate spaces affects the collective life of an apartment building. The architecture obviously has a federative role, as it should unite the inhabitants and reinforce their identity (Hertzberger, 1991). The feeling of "living together" is emphasized by sensory porosities: smells from kitchen, from laundry room, sounds of kids, television, shower... This kind of collective life improves democracy, equality and mutual support (against isolation, poverty, anomie, decay).



Exemples of sitting in the passageway



Surfaces and perspectives



Play of light and shadow

In this context, the inhabitants have to be aware of their responsibility in relation to the life of the building. The circulation space is a set of common rooms, shared by the inhabitants and owned by them, depending on the type of property (collective ownership, rental flats, etc). The point is to improve these semi-private spaces (entrance, staircases, passageways) in such a way that the neighbours will feel personally responsible for them (Hertzberger, 1991). The co-owners have two main obligations to respect: not to use the common spaces at the cost of other co-owners, and to participate financially to the maintenance. Rules are stated to avoid conflicts of uses related to the non-respect of premises and the intrusion into the privacy of others (Atienza, Houdemont, Paris & Wieczorek, 2007).

If these principles are respected, the main issue becomes the time spent by the neighbours in the circulation space. They cross it, walk in it, but never stop. But the appropriation of a space takes time. In a rental apartment building, the inhabitants are moving in and out quite often, so this situation weakens both the inhabitants' place attachment and the relationships between neighbours. It becomes easier to create a long-term community of neighbours when they settle in a place. Finally, the creation of such a community must come with the inhabitants' desire to be involved (Barton, 2000).

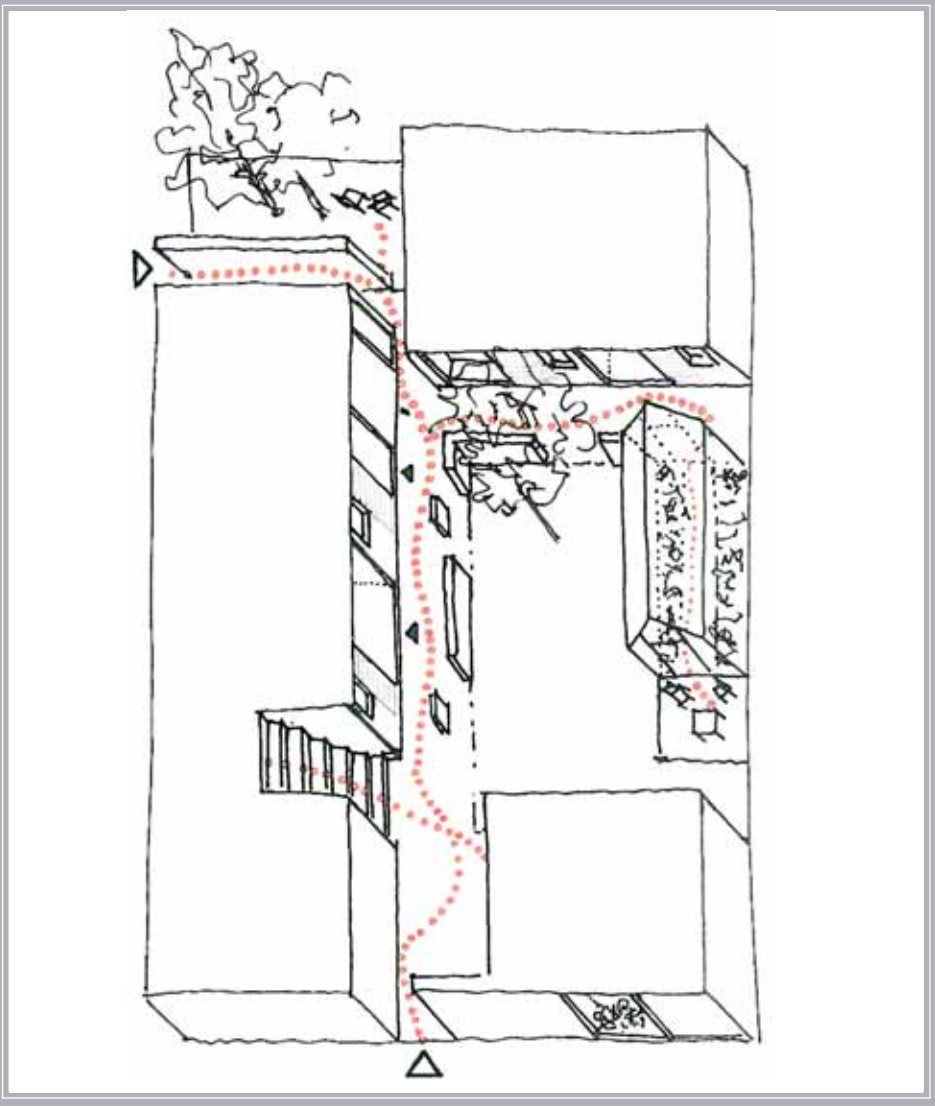
IV. 3 Conclusion

In architectural conception, the apartment was often considered as the noble place of the apartment building, and the circulation space as a banal one. This one was designed as a standard and wall off space, as staircases looked like "stair-cages".

Entrances, stairwells and passageways have the potentiality to be a gathering place, if their spatial qualities (dimensions, light, perspectives, views, etc) are enhanced. The vertical connection, the vis-à-vis and the flexibility of the circulation spaces are key points that consider the privacy of a dwelling. The level of privacy is a subjective balance between the need to protect from others and the will to communicate. In that perspective, the circulation space aims to reconcile the private life and the public one. Furthermore, emotional links and daily routines constitute the place attachment that the inhabitants have with their home.

The circulation space can strengthen the public life if the housing includes plans against individualization (Atienza, Houdemont, Paris & Wieczorek, 2007). The notion of "hospitality of spaces" (Rebois, 2011: 4) involves the inhabitants: they do not only consume space, they also generate it.

V. Micro scale



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Centre
Linköping
University
N
Hitta, 2013

V. 1 From theory to reality

The knowledge collected from case studies is put into the reality of an existing project, that is situated in Linköping. The elaboration of theories confronts the constraints of the reality, the site, the bill of specifications, etc. The design focuses on forming a homelike circulation space, that incorporates a domestic scale, and is concentrated on the spatial and social relationships from door to door. The volume of the apartment building, the openings and the vis-à-vis, the vertical continuity, and the flexibility of spaces are key points in the design process. The plans of the apartment building invite the inhabitants to be involved in the neighbourhood, with three layers of sociability: the individuals (within a family), the group of close neighbours (sharing a landing), and the community (living together in the same housing). Finally, the entrance, staircase and sidewalks is composed of meeting places for a social sustainable neighbourhood.

V. 2 Linköpingsbo2016

Linköping's municipality is running a project that aims to expand the city with a new residential area. With this project they want to promote a mixed and vibrant neighbourhood and connect the centre with the university. This project is based on the concept that "people build the city" with learning, creativity, social sustainability and resources efficiency (Linköpings kommun, 2013). A competition has run in the spring of 2012. OkiDoki Architects won it with their project Tegar (translated allotments).

This competition is interesting in several aspects. First it is an ongoing project, so the theoretical studies of the thesis can confront to economic, constructive and social realities. The second advantage is that both the analysis part and the master plan are drawn, which means that the design process can directly focus on the spatiality of the apartment building. Finally, OkiDoki Architects aim to highlight the social sustainability of their neighbourhood. Therefore there is a point in common since the proposal in this master's thesis is focusing on improvement of the relationships between neighbours, through the circulation space.

Linköping is a city of 148 521 inhabitants, situated between Gothenburg and Stockholm. The district of Vallastaden (the red line on the right page) is located 2.5 kilometers away from the city centre, in the west side. It includes the Linköping University, recreational activities (the open-air museum "Friluftsmuseet Gamla Linköping", Lill-Valla, a playground, etc), a sports hall and an athletics arena.

V. 3 OkiDoki's concept

OkiDoki's project proposes a master plan designed in a dense traditional village scale. It encourages housing diversity in sizes and types. In this neighbourhood, the meeting places are planned to increase the local and social sustainability. The stream Smedstad is passing through the area. Walking paths and bridges will be improved in order to make the place accessible and attractive. In each block, a common house (translated from «felleshus») will be a common meeting place for the neighbours. It may contain laundry rooms, bicycle workshops, etc.

Six main concepts have been stated, they aim to create: a diversity of allotments for a social mix, a strong social network in different social levels, a connection between the university and the city, a walking and cycling transportation, a dense neighbourhood to increase the meetings in the everyday life, and a park to establish a new identity and attractiveness for Vallastaden district (Linköpings kommun, 2013).

OkiDoki's master plan (at the top of the right page)
1. student housing and a greenhouse will be created.
2. a new square will be created, surrounded by a school, shops and offices.
3. Vallastaden project aims to create 1000 dwellings and develop a new park in the northern part.

V. 4 The distribution of the allotments

The master plan is divided into different allotments. Each lot includes a set of specifications about a building shape, its size, height, type of housing, density, etc. The allocation of these lots are attributed to a certain developer: a group of builders, a single builder, a private client or an architecture office. In order to decide who gets to develop each lot, the Planning Board of Linköping will run a competition, focusing on the building characteristics. It is divided into two steps. The first one assesses basic requirements of the program such as the economic stability of the project. The second one develops a criteria based on a point system. The more sustainable the project is designed, the more points the competitor gets. The project that has the most number of points gets the allotment. Each specific point is listed in a table (as citizens' participation, low rent for the tenants, wood building technologies, creative and playful building typology, etc).

Example: Some apartment buildings have to contain at least two different apartment sizes. But the builders who undertake to provide at least four different apartments sizes will be awarded with two points in the evaluation.

OkiDoki, 2012

V. 5 Proposal

Background of the allotment

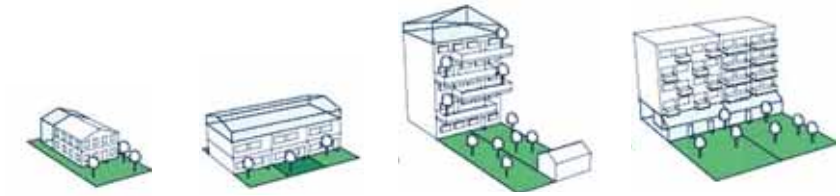
The project is located on the lot "4A" (surrounded by red corners). The choice of this allotment is due to the criteria of the municipality, expecting that a single builder will develop a multifamily building (as all the green areas in the map). This builder is free to rent them or sell them. The specifications of the building construction require that the housing should have between fifteen and twenty flats, included in around 800 m^2, in four floors.

Its location, being on the corner of the block is an attractive place, as it forms a transition between the public banks and a more private square inward the block. Furthermore, two sides of the lot are facing the street and the stream, and a bridge is located in between. Then the facades will integrate both protection and opening systems for the privacy to be well delimited. The integration of the proposal within this area is an issue, as buildings of different scales surround the lot: all from a detached house (in blue on the right) to dense apartment buildings (in green). This four-storey building is dense enough to experience the design of a circulation space, where the flats are easily accessible.

The district is composed of buildings designed by different architects, in different styles. The detailed plan proposes the area to be organically developed, made by additions little by little. The density is formed in a human scale. The general height of the buildings is maximum six storeys high. The blue lots are detached houses; the orange lots are townhouses; the purple lots are apartment buildings constructed by a group of builders; the brown lots are the common houses ("felleshus"). The lots surrounded by a pink line are reserved for architecture companies. One of the main reference is MalmöBo01, created in 2001. The quality of the neighbourhood and its convivial ambiance is a part of its success. This area is mainly for pedestrians, and the streets are narrow enough to be comfortable to walk in, but also wide enough to get large perspectives.

OkiDoki Architects and the municipality of Linköping integrated reference projects in the specifications, as examples to guide the design process. Among them, two apartment buildings especially highlight the transition from public to private: the Svartlamoen Housing (Trondheim, Norway) and the transformation of housing block (Bois le Prêtre, France). These projects, as well as the seven buildings described in the previous chapter, are references for the final design.

Typologies of housing



Detached houses | Townhouses | Multi-family block

Meeting places

Home | Wintergarden | Park | Park

OkiDoki, 2012

Linköping, 2013

Master plan

The allotment includes three buildings: two four-storeys high, and one two storeys high. They develop two orientations: north/south, with a continuous light the whole day, and east/west, with different luminosity according to time of day. The openings between the courtyard of the housing and the street are limited. Two accesses state the privacy of the lot. The shape of the building is formed by a superposition of modules. Each unit is a flat divided into two thicknesses that play with emptiness and fullness. This emphasizes the depth of the facade with bright and dark walls. The rationalisation of the structure is completed by the circulation space that wriggles into these modules. The north-west corner is a main place, as three floors include meeting place on this side: on the ground floor, as a garden, on the third floor as a terrace and on the fourth floor as a belvedere. This superposition of places aims to connect the stream with the housing and acts as a transition between the public domain and the privacy of the courtyard. The location of the flats suggests a hierarchy in the groups of neighbours: the next-door ones (group of two apartments), the ones living on the same floor (group of three, four or five apartments), and the ones of the buildings (group of fifteen apartments). The aim is to encourage the meetings and to sustain the community of the neighbours.

The construction system includes two materialities (wood and metal) that distinguish the housing and the circulation space. This system of two structural languages highlights the presence of the circulation space, that runs along the facades (as illustrated with Svartlamoen Housing). Since this project wants to focus on the circulation space, the details of the construction are not meant to be developed. The housing structure is composed of a timber construction with cross-laminated timber (KLH). This material develops structural wall, ceiling and roof elements in large formats. It is locally produced from spruces and forms large-format solid timber elements. The circulation space is built with a metal structure: the fences and the metal beams has a dark color in order to emphasize its presence (as the reference picture on the right shows). Then the metal construction supports wooden floor on top of it. This highlights the continuity of the floor between the flat and the circulation. Furthermore, the wooden furniture in the circulation space preserve the privacy of the dwellings, in opposition to the transparent metal grid.

The project is developed through a set of three strategies: implement a sustainable design, integrate the building into the neighbourhood scale, propose an alternative way to live. These strategies are illustrated by lists of spatial designs that the building shape is based on.

Master plan - 1/400°

IMPLEMENT A SUSTAINABLE DESIGN

INTEGRATE THE BUILDING
INTO THE NEIGHBOURHOOD SCALE

PROPOSE AN ALTERNATIVE WAY TO LIVE

- The project aims to enhance a social sustainability. The relationships between neighbours are strengthened with different kinds of meeting places in the apartment building: this housing supports a mutual assistance and equality. Furthermore, a diversity of flats, in size, dimensions, orientations is proposed to increase a mixed neighbourhood.
- Since the circulation space is outdoors and attached to the facade, this space does not need to be heated or insulated. It saves both energy and resources.
- The structure of the housing building is made of timber construction. In this project, the aim is to use only local materials.
- The flats are designed as pre-fabricated units. This industrial type of construction is cheap and fast to build on site. As these units structure the building, the partitions of the apartment are removable. The rooms can be transformed with time, as well as their functions.

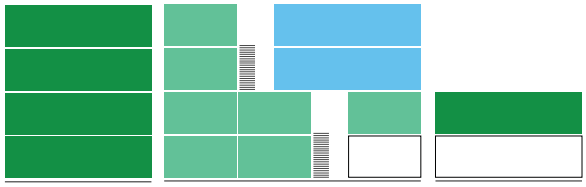
On the street side:
- The apartment building is four storeys high and constitutes an intermediate height between the surrounding buildings. Furthermore, this height accentuates an urban street profile.
- On the western facade, the location of a passageway on the third floor constitutes two strips of double height. This layout makes the facade monumental, but is still appropriate with the scale of the street.
In the inward block:
- On the eastern facade, the two passageways highlight a domestic scale and makes the facade dynamic and alive.
- The low building on the southeast side constitutes an adapted scale for a pedestrian friendly neighbourhood.
- The location of the entrance on the south side of the lot increases the transition from the public to privacy,. The front door of the building is situated in the walk path that is more private than the large street. Besides, it connects the inhabitants with the inner block.

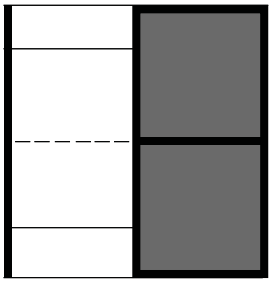
- To emphasize an alternative way to live, the housing project aims to develop extreme layouts. The circulation space is designed as a long promenade to walk on. The elevator is purposely located far away from the main entrance, yet still accessible.
- The circulation space integrates furniture to invite the residents to spend time outdoors. This furniture is meant to be both fixe or movable, depending on its location and its use. The neighbours are also free to include more common equipment.
- The flats are rather small in order to give a large space for the circulation. Once again, this system aims to invite the neighbours to spend time outdoors.
- The flats are like open-constructions, as the living-room and the bedroom are not defined. The inhabitants can choose how they want to shape them. Furthermore, winter gardens and balconies can be added.
- A set of meeting places is included in the building. Their hierarchy creates a diversity of spaces where the inhabitants can isolate or socialise as they want.

Apartments

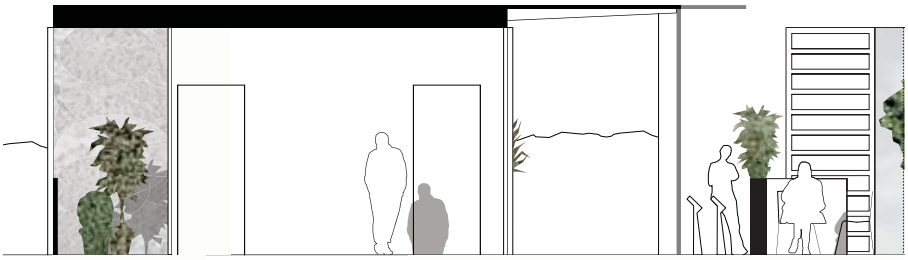
The apartments are designed as repetitive units, divided into two parts. The wet rooms (bathroom and kitchen) constitute one thickness, as they are walled off by wooden walls. The dry rooms (bedroom, living-room) compose a second thickness, that opens towards the surroundings with large windows. Finally it forms a fullness and an emptyness on the facade, with light and dark walls. The units also produce a diversity of flats in terms of size, as well as light (it differs if they are orientated north-south or east-west). In total, the 14 flats (as illustrated with the facades, on the right page) are divided into 7 studios of 30 m^2 (in light green) and 7 two-room apartments (5 of 53 m^2, in dark green; 2 of 60 m^2 in blue). This aims to create a mixed neighbourhood, with students, couples, families, seniors, etc. The flats being rather small is to encourage the neighbours to spend time in the meeting places of the circulation space.

This repetition of modules is minimised by the possibility, that the residents have, to install a winter garden or a balcony in these "holes". These new functions become thresholds that surround their apartments. Furthermore, sliding blinds act as filters: their flexibility enable the residents to choose to open or close their dwellings according to the time. This principle was experimented by the french architects Lacaton & Vassal in different housing projects and it is obviously a success, as this winter garden gives a lot of light to the apartment, and constitutes an extra room for the dwelling (as explained in the chapter four). Furthermore, as it is not heated in winter, the room still serves the purpose to insulate the flat. Finally, this set of layout produces a diversity of modules with different appropriations. The facades are alive, as they change in time. The winter garden, the balcony and the sliding blinds are filters, that enable the residents to become stakeholders of their home, as they define on their own its limits.





Module of the flat



Section - 1/100°

First floor - 1/100°

The circulation space

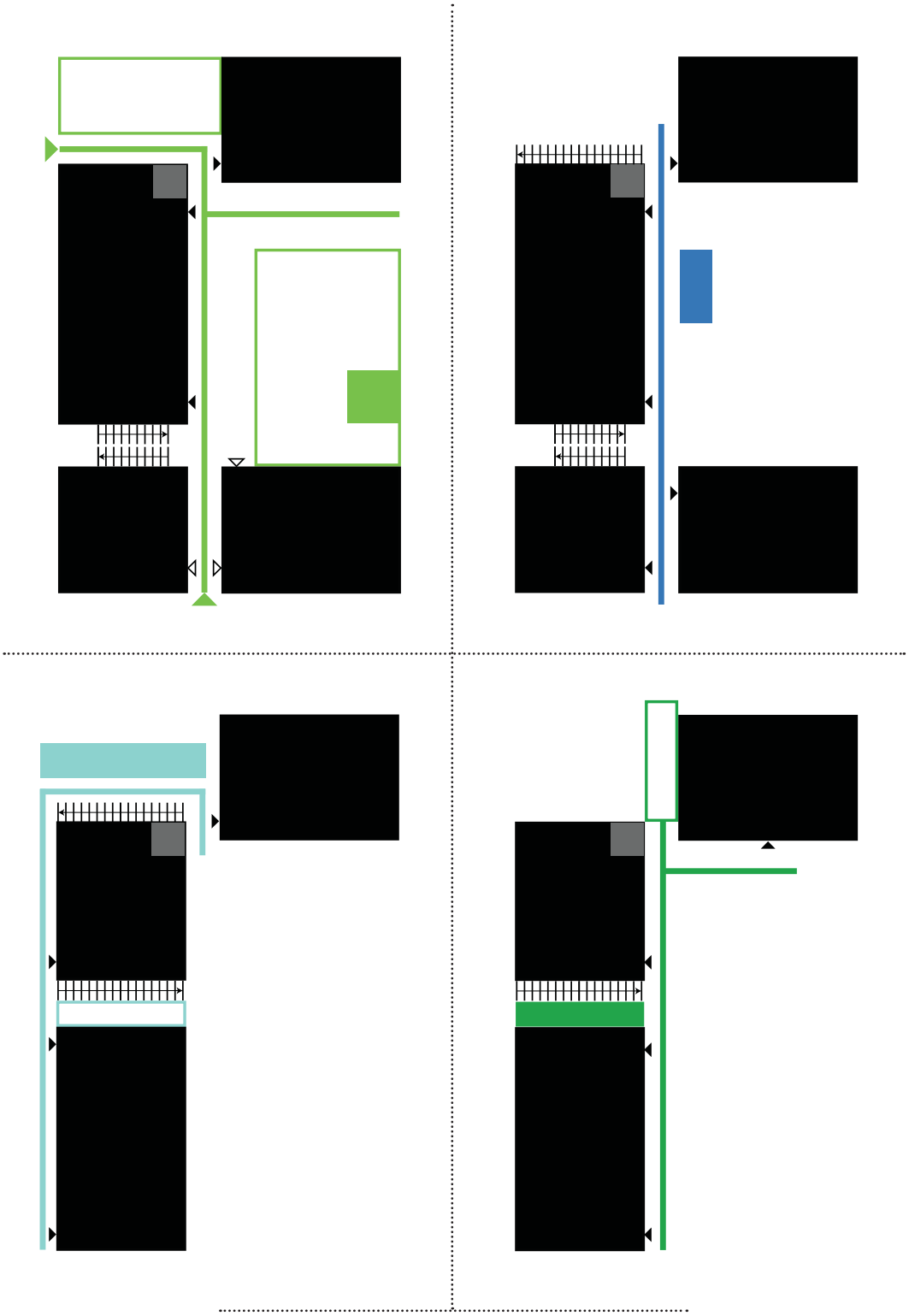
The location of the circulation space aims to produce a diversity of views, lights, places and perspectives towards the surroundings, in order to make the promenade attractive. The east side gets morning light just like the west side has the evening light.

It starts as a wide space of 2,4 meters on the ground floor in order to invite the residents to enter. It narrows floor by floor down to 1,2 meters. This creates a kind of hierarchy, stating the difference of privacy between the storeys, as the ground floor is more used by the residents than the top floor. Finally, it emphasizes the vertical connection from the semi-public first floor and the semi-private top floor.

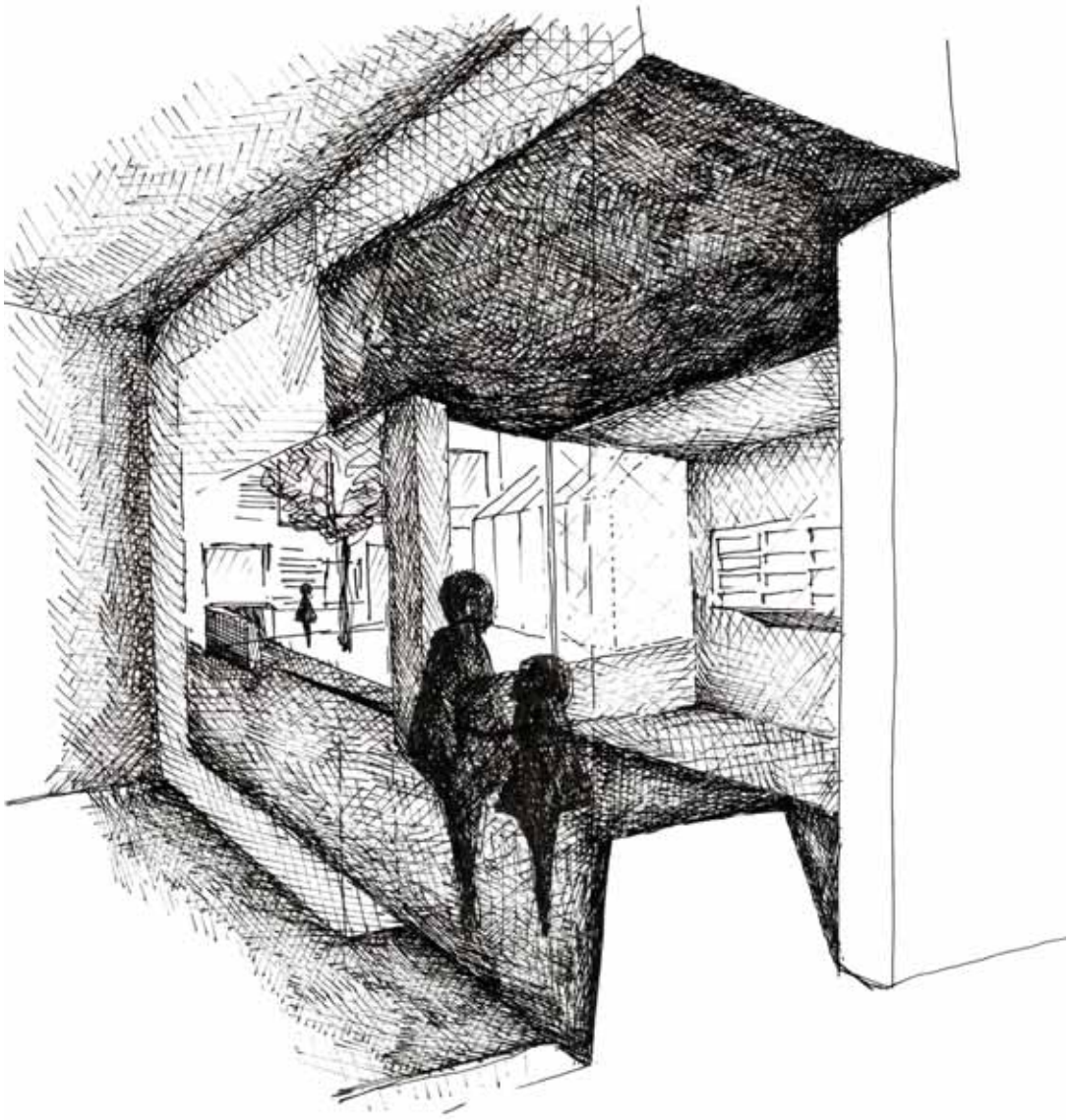
The flow of the circulation space does not include shortcuts. Its length is long enough for the residents to enjoy a promenade in there, but short enough for the flats to be quickly accessible. This extreme design emphasizes an alternative way to live by spending more time outdoors. The shape of the circulation space is rational, with right angles. Its dimensions are compromised: they give a large space for the neighbours without darkening the facade and the flats. Its proportions are optimised for more flexible uses. The design is both pratical and poetic, as the residents enter theirs flats through a free and relaxing promenade.

The hierarchy of meeting places

A diversity of meeting places within this apartment building is created in order to sustain the neighbours' relationships. Different kind of activities are proposed: an entrance for the neighbours to meet, a courtyard for the children to play, a square for relaxing, terraces for eating (the squares with the strips on the diagram), a workspace and a belvedere. But these spaces aim to be flexible, free for any other kind of appropriations (the neighbours are free to hang pictures on the walls, share furniture or books in the entrance, etc). The furniture of the space indicate how the circulation space can be used in an alternative way, but the last word is for the residents to decide how they want to live there. Furthermore the number of meeting places and its dimensions of the meeting places is limited in order to gather most of the neighbours in the same place and have it crowded rather than empty. Finally the meeting places are micro-spaces as they are surrounded by walls (except for the entrance and a green house) and they are included in the width of the circulation space. They are meant to be used in everyday life but with different temporalities, according to the seasons, the orientation of light, if they are sheltered from the rain or not, etc.



Plans: locations of the circulation space and meeting place

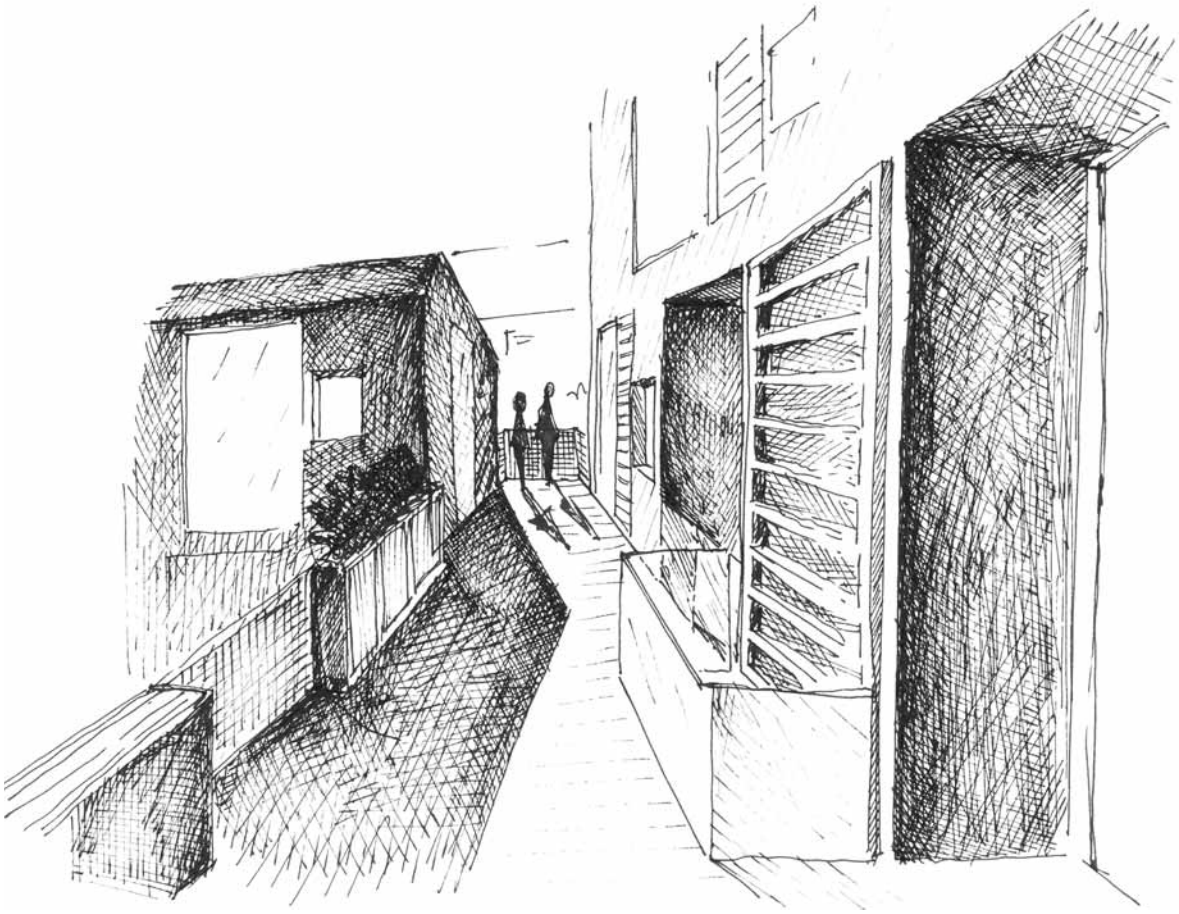


The entrance

The entrance is furnished as a living-room in order to create a comfortable and cosy space where the residents can wait for the laundry to be done, where they can read their letters, where they can meet their neighbours. Instead of crossing this space, the desigan aims to make the residents spend time in it. The room is opened towards the courtyard with large windows, and is partly outdoors, covered by the circulation space.

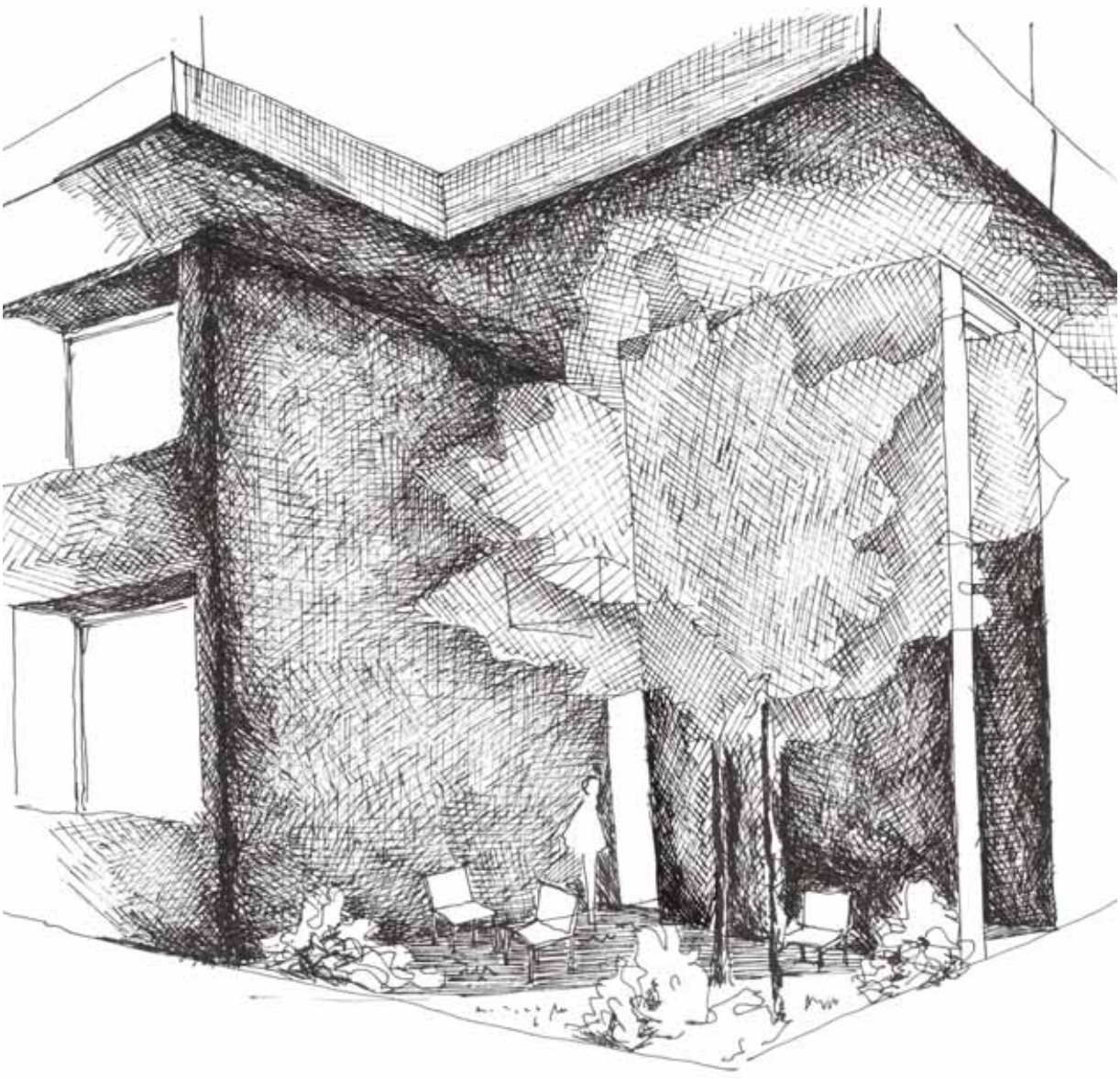
A vivid courtyard

In this inward place, a large grass lawn grows. In summertime, the residents can have a picnic, play football, or install an inflatable swimming-pool. The sounds of dishes, footsteps and children' cries will spread out in the building and make it alive. In the winter, it becomes a large field of snow, everyone can play with snowballs or build igloos.



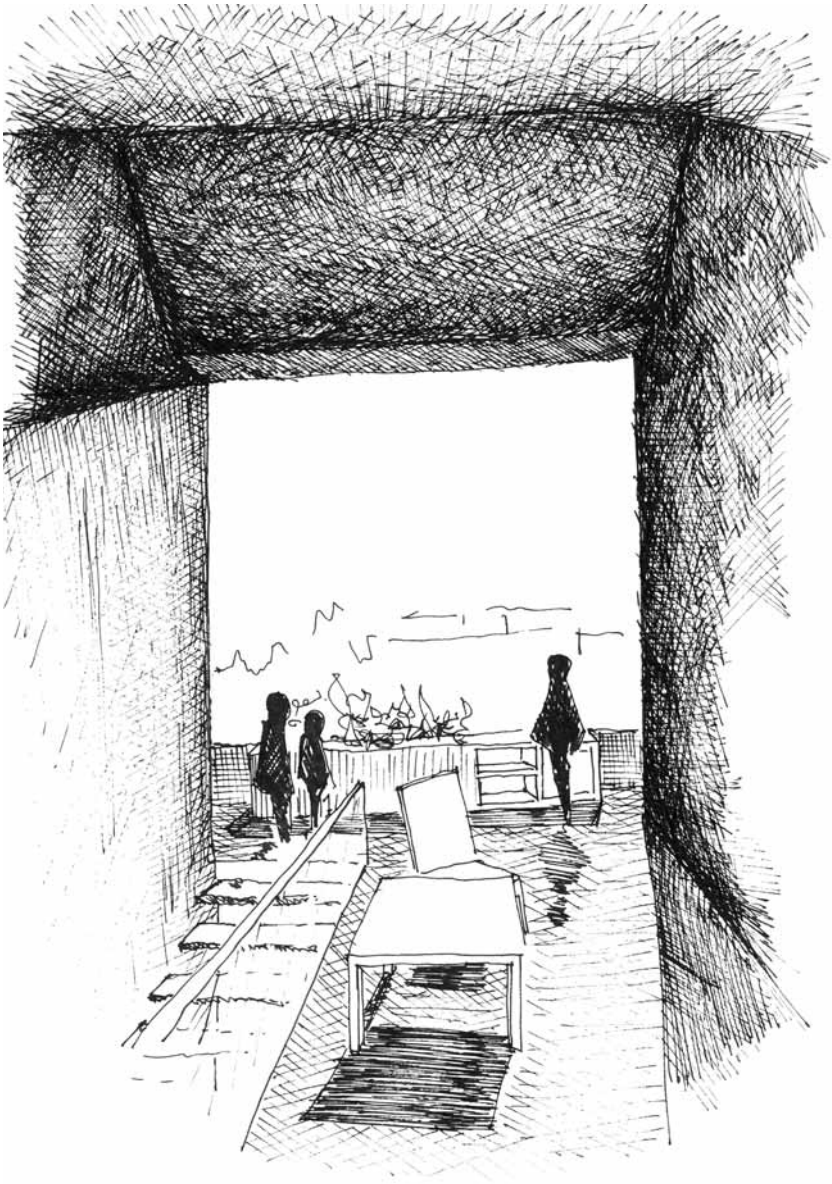
A place where to stroll

The passageways are wide enough for the residents to stay without blocking the way for passing people. Some high chairs invite the inhabitants to have a coffee outdoors. The views towards the surroundings are changing as the residents continue to stroll. In summer, the winter garden or the balcony can expand in the passageway and become an extra terrace for the flat (as illustrated above, view from the second floor).



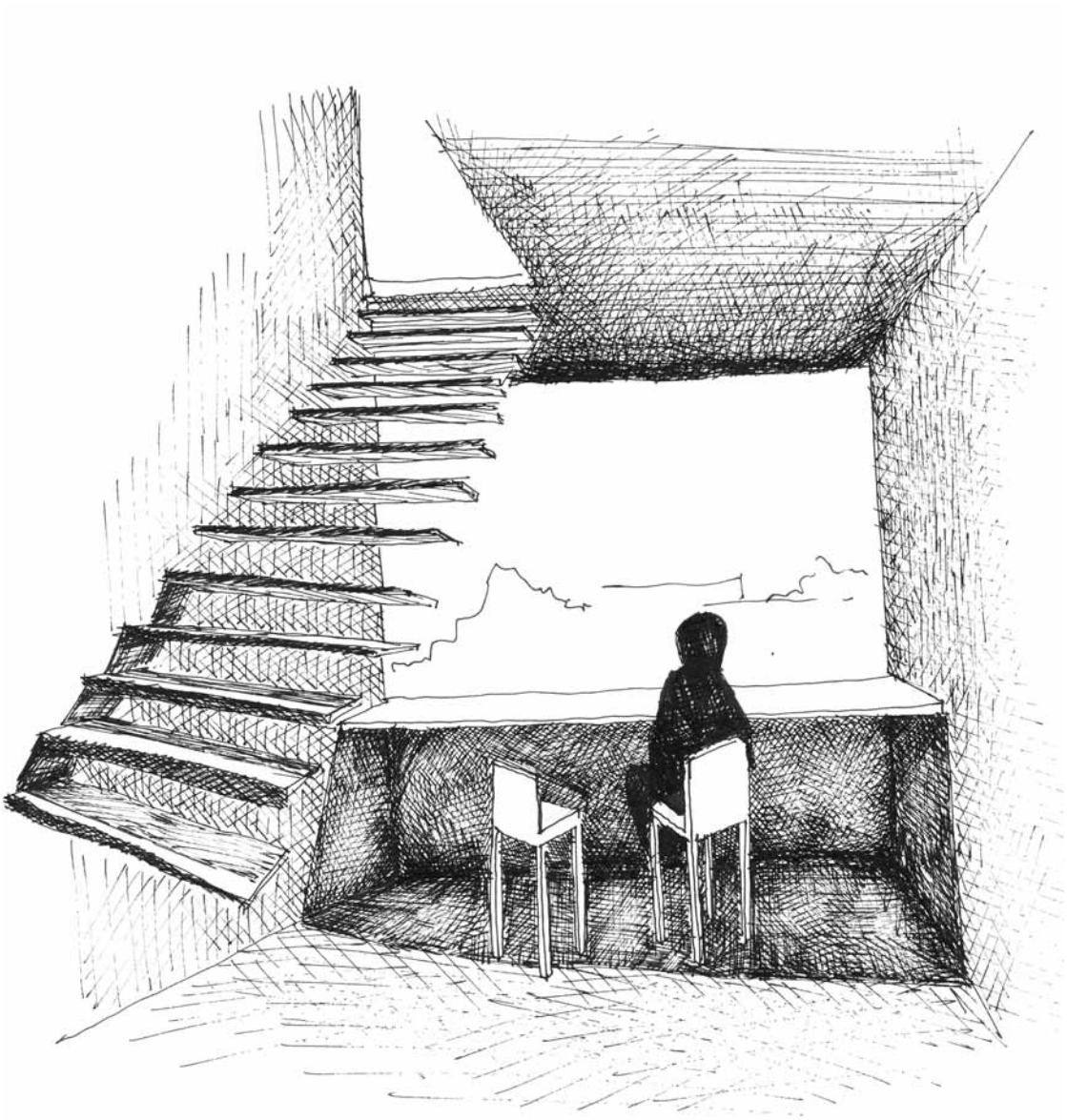
A relaxing square

This place is located on the northwest corner of the lot. The residents can meditate and contemplate the nature, the stream and the activities from the street. Its design creates a private and cosy place. There, the inhabitants can isolate from the big crowd of the city, by looking at it, as being alone in company.



One terrace per floor

One terrace for outdoor dining is included on each floor in order to easily transport the food from home. They are all furnished with tables and chairs to encourage the neighbours to have lunch or dinner together. The dimensions are narrow to make the place more crowded than empty. All four terraces have different orientations and are in light at different moments of the day. The terraces on the first and second floor are on the east side and get light for breakfast and lunch time. On the third floor, the terrace is located in the north-west corner, which is ideal for having dinner in summer. Besides this one is bigger than the others, which makes it a possible meeting place for the neighbours of the whole building. The terrace of the fourth floor is situated on the west side also, and could be a place where to have a *fika* or a dinner. This is also covered and could be closed by sliding walls in winter (picture above).

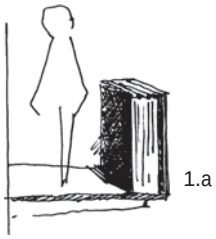


An outdoor workspace

One outdoor workspace is installed on the third floor. It is a place where the residents can isolate and concentrate easily on their work. Its orientation towards the courtyard is meant to make this space quiet. Since it is partly covered, it can invite other kinds of appropriations when it is raining or snowing.

A belvedere

The walk through the circulation space goes up the building, along passageways and staircases. When the residents reach this elevated space, the view towards the surroundings gets panoramic. A belvedere on the top floor is designed as a place to contemplate this view.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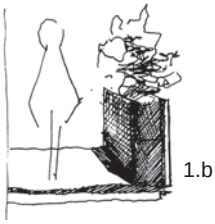
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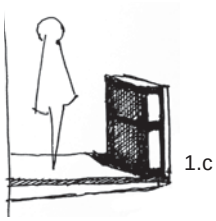
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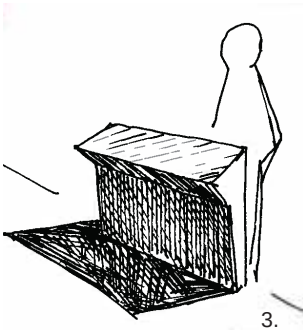
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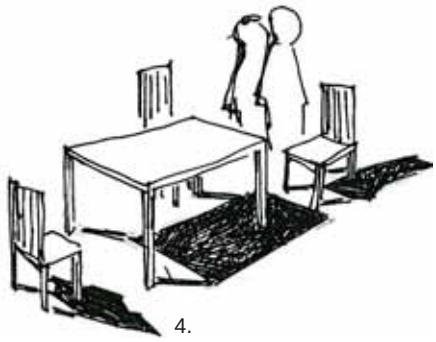
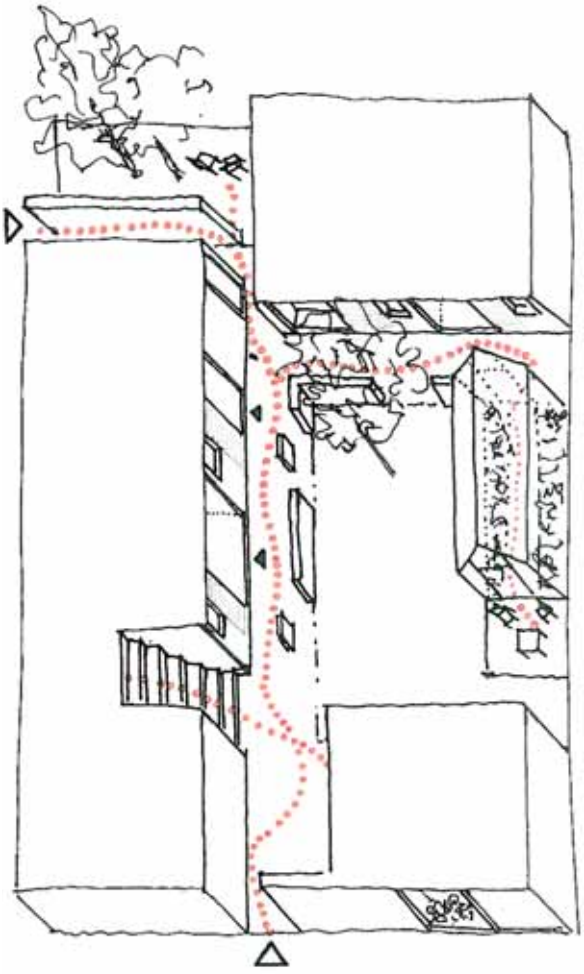
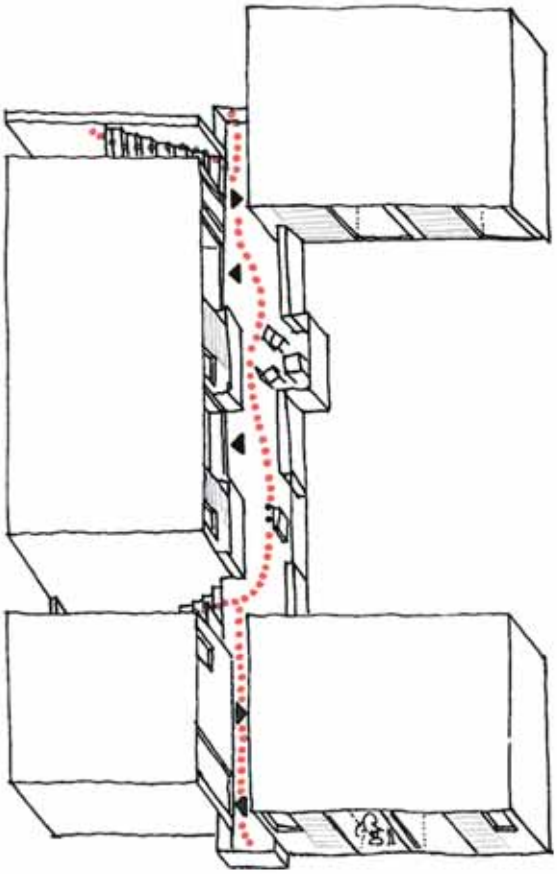

4.

Furniture

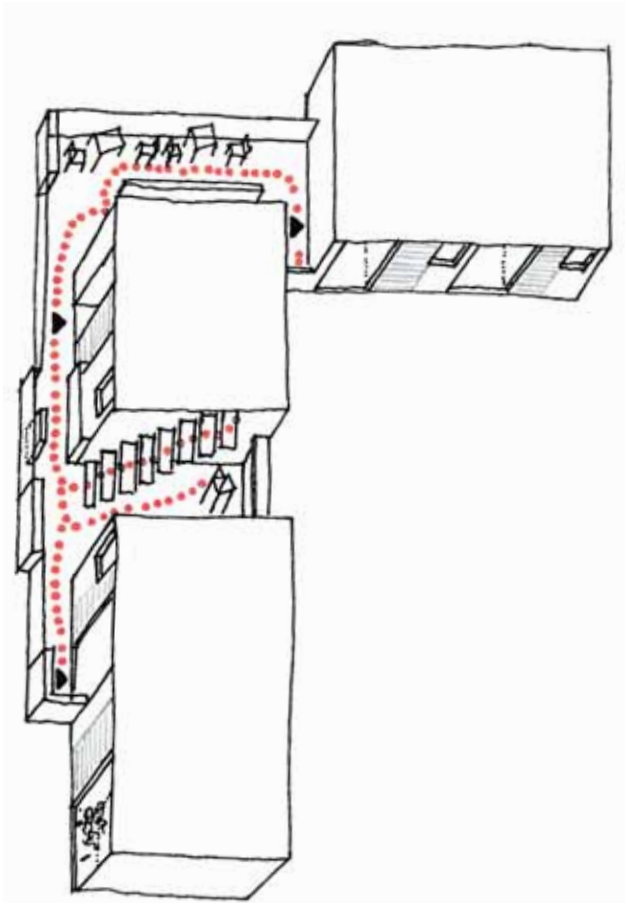
Some furniture are included in the circulation space. They are owned and maintained by the residents, as the building is a co-owning property. The different types of furniture suggest different rhythms for the inhabitants to experience the circulation space (as explained and illustrated in the chapter four, about the three dimensions). Along the fence of the circulation space, a flexible piece of furniture adapts to three different uses: for hanging the laundry (1.a), for growing plants (1.b) and as a storage (1.c), as illustrated on the left side of the drawing page 82. Some armchairs (2.) are located on the groundfloor and are removable. High chairs (3.) invite the neighbours to sit on for few minutes when the set of chairs and tables (4.) encourages them to stay longer. Finally it creates different situations where the neighbours walk, stand, sit a short time or sit a longer time.



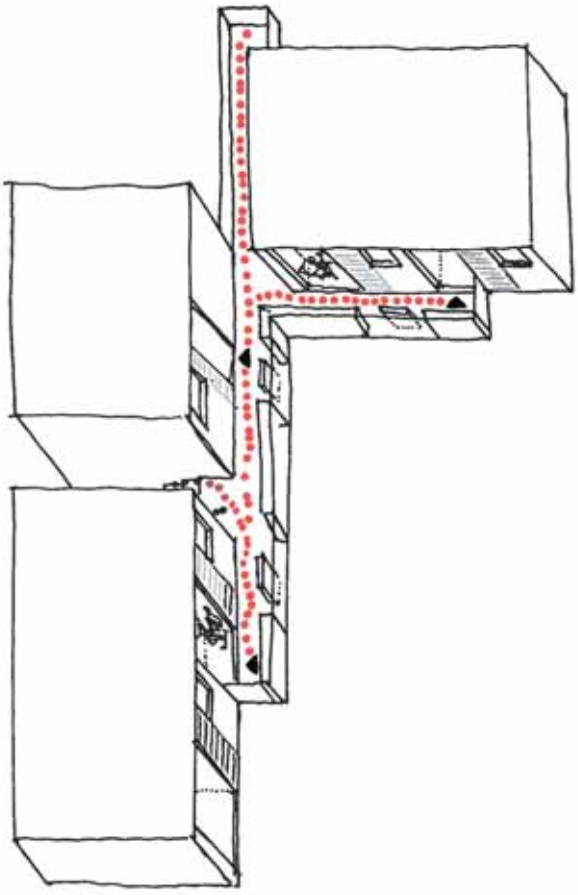
First floor



Second floor



Third floor



Fourth floor

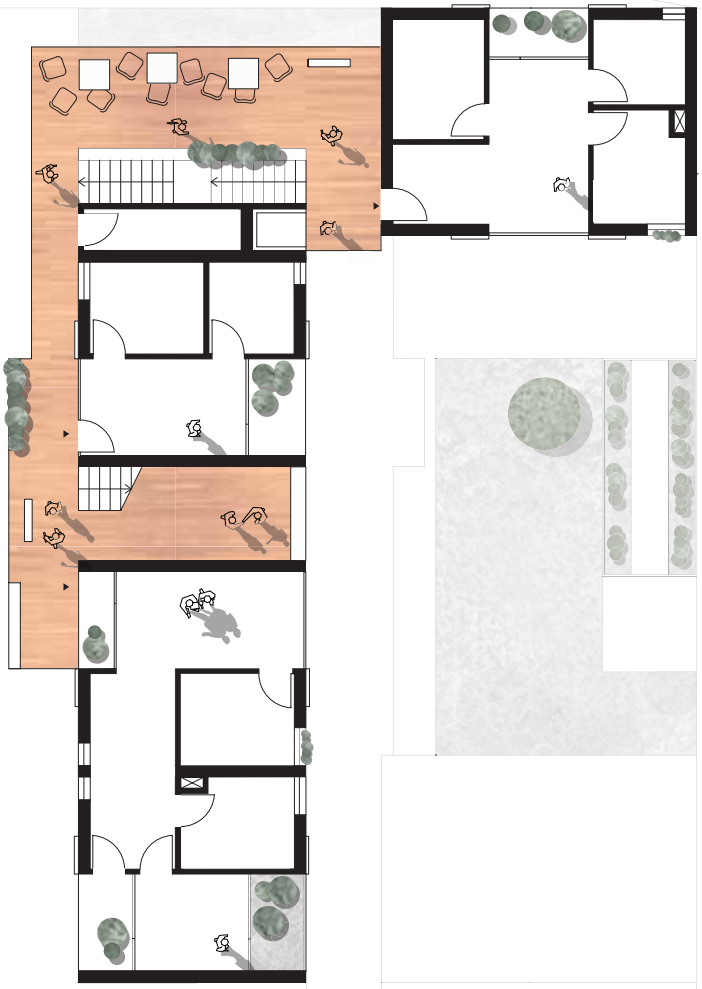
First floor - 1/200°

2m

N

Second floor - 1/200°

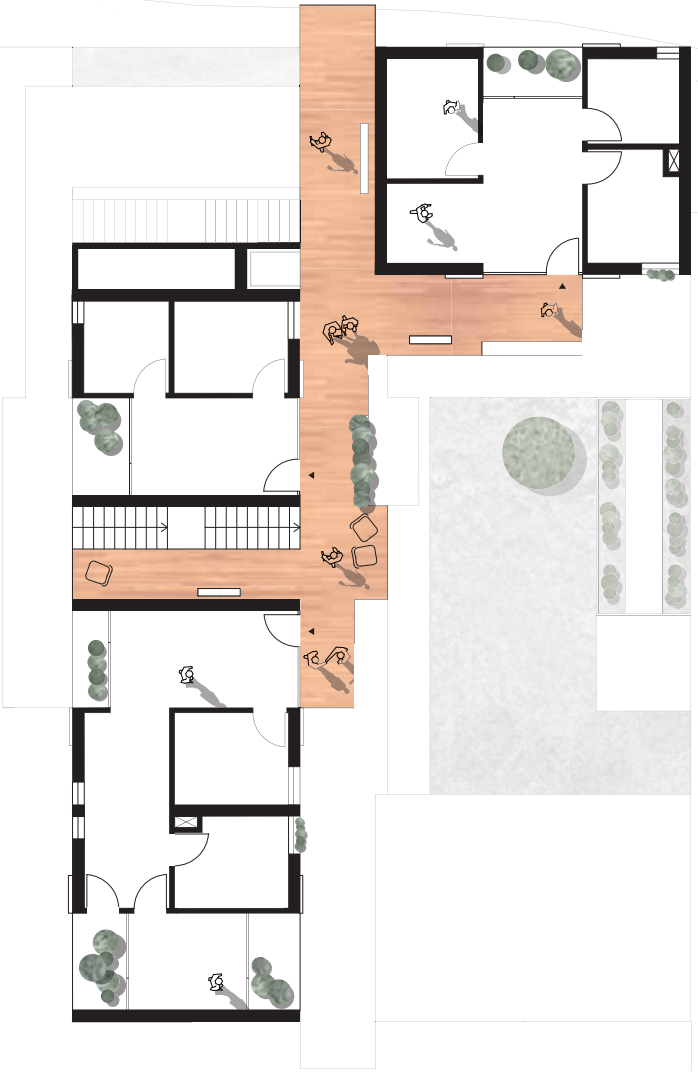
Third floor - 1/200°



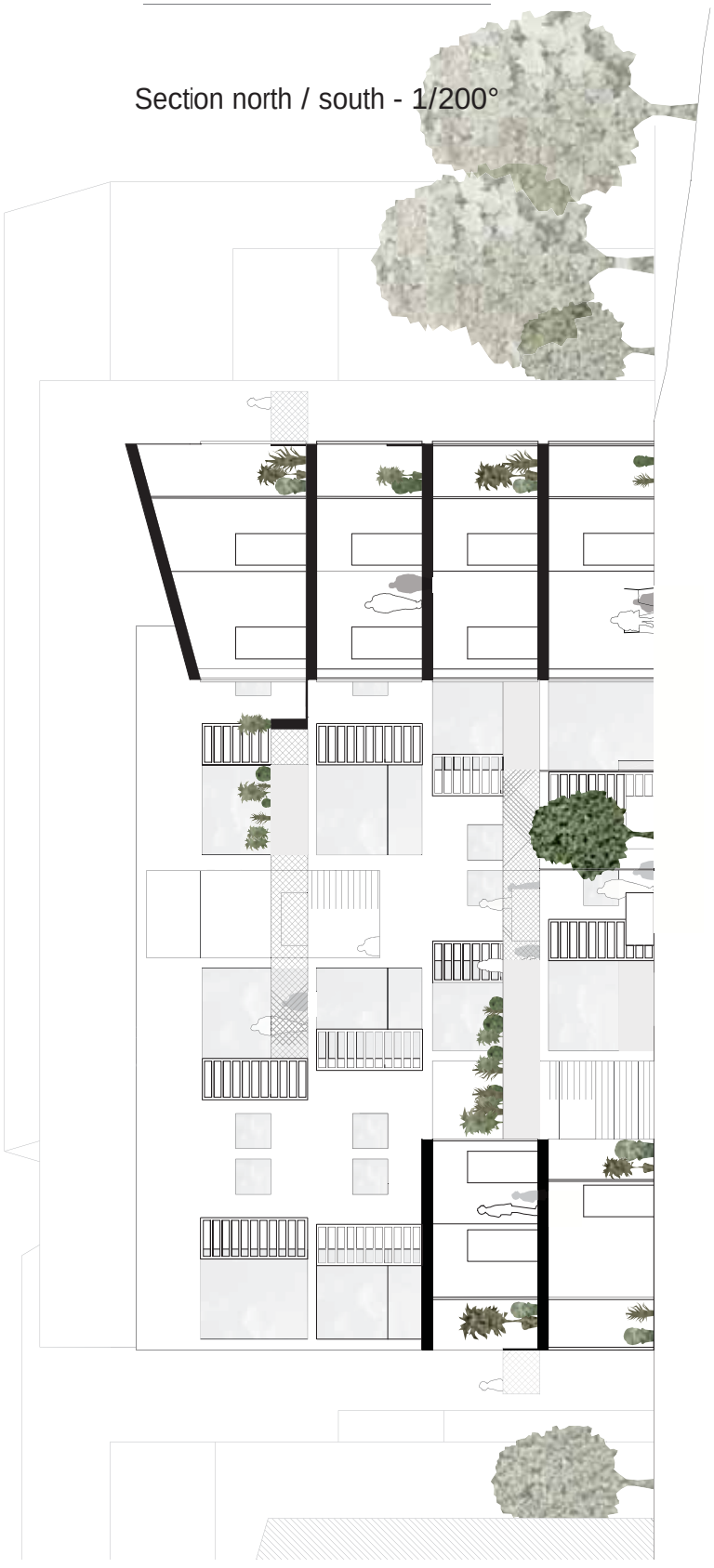
2m

N

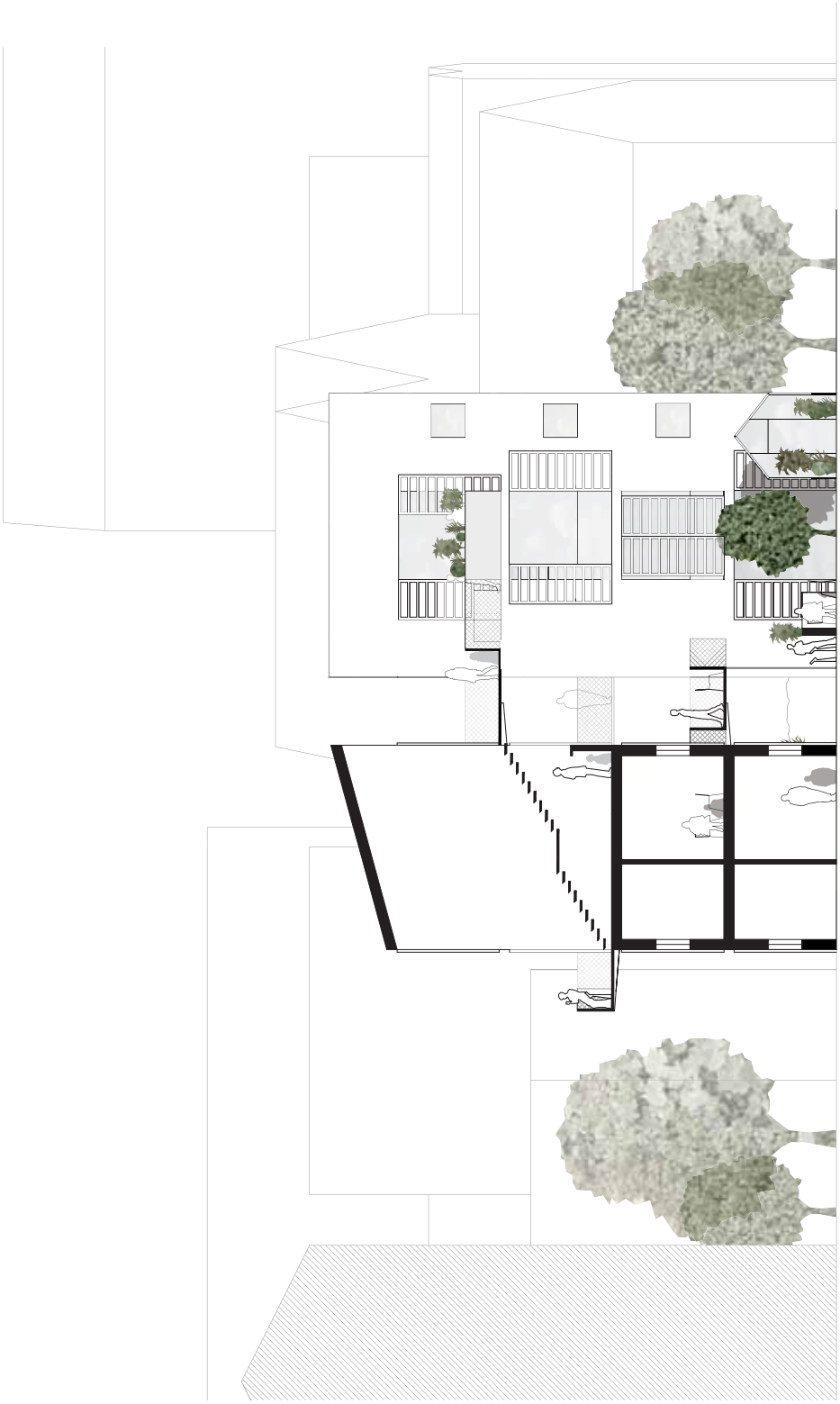
Fourth floor - 1/200°

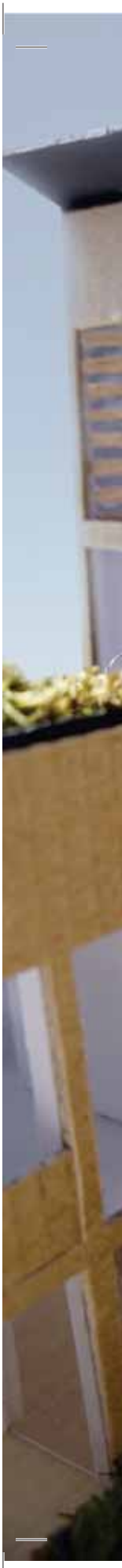


Section north / south - 1/200°

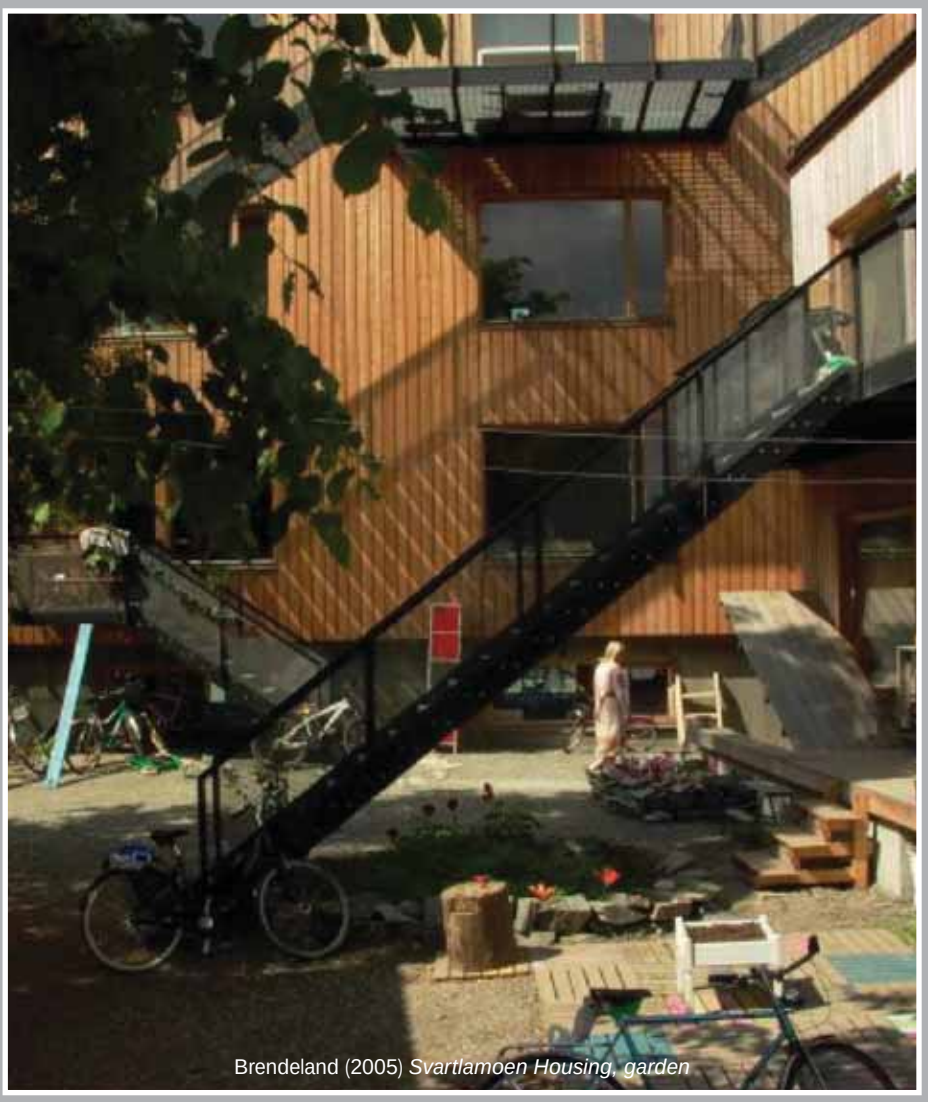


Section east / west - 1/200°





VI. Conclusion



Brendeland (2005) *Svartlamoen Housing, garden*

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“Ideally, form, function and construction should appear inevitable and indissoluble.”

Banham (1962: 30)

VI. 1 Summary

The circulation space of an apartment building spreads from the front door of the building to the front door of the dwelling. It includes the set of entrance, corridor and staircase and is the main common place for the neighbours who live together in the same building. The residents are used to cross it more than stroll in it. But if they change their routine and spend time in it, the circulation space could become a meeting place that sustains the neighbours' relationships. This thesis demonstrates that the temporality of the circulation space can transform: instead of walking fast from door to door, neighbours could enjoy having a promenade in it.

The eleven projects analysed in this thesis, illustrate eleven different designs of a circulation space. These apartment buildings highlight the presence of this intermediate space and suggest alternative ways to live in it. The project developed in the chapter five, is based on these references and emphasizes the transition from public to privacy. But what about the reality? Do the pictures of this report represent crowded circulation spaces? Actually, these look lifeless. Through the visit of seven of these buildings, I always met only few residents (sometimes none). The architect's will to create a flexible space confronts the daily life of the residents. They don't use that much the circulation space, even if this one integrates pleasant and inviting spaces. It looks easy to go drinking a cafe in the circulation space. But other kinds of appropriation might become harder to put into practice: children who play in this intermediate space can be noisy as well as a diner, etc. Alison and Peter Smithson made a collage of a passageway (illustrated page 29). This one looks crowded when in reality, the four pictures of Robin Hoods Gardens represent an empty deck. Moreover, the climate is another issue. The housing project is located in Linköping where the winters are snowy and cold. If it was situated in Spain, the circulation space would be much more used in December there than in Sweden. It becomes a challenge to adapt an idea to local climates.

The thesis develops layouts for the circulation space to become a gathering place. They are supported by a theoretical investigation, with literature studies; case studies, with exploration of typologies, spatialities, study visits; and interviews with inhabitants. This toolbox of layouts is confronted to the reality of an architectural project. Le Corbusier and the Smithsons designed the circulation space of their apartment buildings for the pedestrians to walk in. This report highlights their will to connect the public street to the privacy of the flat, through three key issues: the vertical connection, the horizontal connection and the spatiality of the circulation space.

The staircase connects the street to the flat vertically. Its diagonal shape consumes a lot of space and can create residual places under and above it. A way to avoid this is usually to build them upon each other in a repetitive way. It is obviously a space to cross, not to stay in, and the appropriations are limited. But still, its form can develop qualities that enhance its presence in the building. For instance, it is often designed as a piece of furniture, either with shelves or as a storage under it. The stairs can also extend and become rows of seats. Moreover, their materiality can transform them into filters, when the play of light and shadow make them poetic. Finally, the staircase should not be reduced to a functional space, but can sustain the design of the housing building.

The horizontal connection from street to flat is shaped by corridors and passageways. This thesis shows that it is possible to design them as a semi-public place, and at the same time preserving the privacy of the flat. Then the vis-à-vis between the circulation space and the apartment is a key point that the design has to deal with. The openings of an apartment towards the passageway invite the residents to appropriate it as a balcony. As the same time, a set of layouts should enable to close the openings. Then the thresholds of the front door and the windows can integrate flexible arrangements such as filters, furniture, plants, intermediate rooms (like a winter garden, or a balcony), sliding blinds, etc., in order for the inhabitants to be able to decide how much they want to see and be seen from the outside. The openings of an apartment are not just holes in the walls, but can play with the porosity. Finally this set of layouts would make the facade alive, as it would change according to the will of the residents to expose their privacy or not.

The spatiality of a circulation space is based on two principles: the flow and the furniture. The flow has to articulate the hierarchy of thresholds within the building, between the different spaces (street, entrance, corridor, staircase, flat). In order to create an attractive promenade, it has to include a plurality of temporalities, orientations, and intensities, that make the walk dynamic and varied (to walk in a passageway is different if this one is located on the street side or on the courtyard side, the walk through the entrance is not the same as the one along the passageway, etc). Finally the project highlights the micro-scale of a circulation space. It is not composed of wall off spaces, but by "moments" or micro-spaces, defined by the use of the residents (for instance, the space where to sit and drink a coffee, the space where to work, etc). These experiences are also defined by rhythms, and change during the day, the month and the year. Then the furniture of the circulation space defines those micro-spaces. They invite the neighbours to spend more time outside and to meet each other. They can also articulate the privacy of the flat with the circulation if they are designed as filters. Finally, if the circulation space includes furniture, its characteristic of being

a transition is minimized, as it becomes a meeting place where to stay rather than to cross.

The circulation space is an antagonistic place: it has to be functional enough for the flat to be accessible, but can also be a poetic place where to climb up above the city and contemplate the view. It can also be a flexible place where the inhabitants extend their flats, but at the same time the furniture should not block their way home. It is a place based on contradictions: it could be both semi-public and semi-private. The connection between the apartments and the passageways has to incorporate both protection and opening systems. This list of dualities is long, and makes the architecture of the circulation space complex. Finally the residents interpretate the circulation space by the experience they have in it and choose how they want to live in it.

In conclusion, the scale of the apartment building influences the conviviality of the neighbourhood, as it is easier for the residents to recognise each other in a small or intermediate scale building. The circulation space has to be a space that invites the inhabitants to spend time in it. But the creation of a community comes with their desire to be involved in the collective life of the housing building.

VI. 2 Personal reflection

The flexibility defines the ability to be easily modified. A room and a piece of furniture are qualified as being flexible if their forms can adapt to different uses or functions. This thesis demonstrates that a circulation space can also integrate flexible layouts to make it interactive. Its main function is to connect the street with the flat. But temporary appropriations can transform it into a terrace or a balcony (for instance, if the dimensions suit table and chairs). Then the spatial organisation and especially the dimensions become key issues. The precision of the plan is fundamental, to accommodate different uses, without disturbing others. This change of function makes the space dynamic, alive and active. Besides, the temporality is a feature to consider: this change can be link with time of the day, the week, the season, etc. Make the circulation space flexible was the first challenge in the design process of the project, particularly applied to furniture.

The privacy is not included into a single room but into a set of spaces from the more public to the more private. In a flat, bedroom and bathroom represent the private sphere whereas kitchen and living-room are the public one. In an apartment building, the definition of the circulation space is ambiguous, as this common space can be semi-public or semi-private. In the project, the apartments integrate sliding blinds that give to the residents the choice to

show or hide their privacy towards the street. Moreover winter gardens and balconies act as filters, since the indoor spaces are set back from the facade. These examples represent the articulation between public and private and are a part of the home environment.

The project stressed the importance of micro-spaces in architecture. Their identification on a floor plan is difficult since they are qualified by furniture and residents' appropriations: they are not walled-off spaces. Nevertheless, the organisation of a room can give some clues about it (for instance, a window and its close surroundings can be defined as a micro-space where the inhabitant sits and has a coffee). The localisation and the size of a micro-space can also change in time, according to different uses. Finally, the optimization of spaces avoids the creation of empty and under-used spaces and gives qualities to these micro-spaces.

VI. 3 Professional role in future

The enhancement of the "under-spaces" is an issue in the architect profession, as those are often left out in the design process. In a project, some spaces look more noble than others (living-room, entrance versus parkings, garbage room). One of the challenges will be to give as much as qualities to all of them, with suitable light, good proportions, etc. Even if they are used only few minutes per day, their functions are essential in the organisation of a building and they deserve the same qualities as other spaces. For instance, a pleasant garbage room would encourage people to recycle their waste. Besides, in a long term perspective, the functions of these "under-spaces" might change. Then they need to be flexible enough to adapt to new uses.

The common spaces (entrance, laundry-romm, etc) within an apartment building are premises that give to the residents a place where they can gather. The conviviality of a neighbourhood can grow in this place, and develop a sustainable environment. In the architect profession, the integration of those places within a housing project would encourage the neighbours to meet and socialise. Those are also the actors who create a safe and welcoming apartment building. But what about the need for socialising? With the birth of new means of communication (skype, facebook, twitter, etc), people are connected with friends and relatives directly from home. Are the neighbours' relationships going to transform in the future? Will the residents' mutual assistance decrease? Today, "eco-neighbourhoods" are developing with the creation of local communities (chapter two). The nature of the neighbours' relationships might change in time, but not disappear. Our neighbours will always be our neighbours.

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